PRINTING PRODUCTION

JULY
1960

Contrasts in the old (left) and the new (above) styles of plant lighting.

IN THIS ISSUE:

How Much Light is Needed in Printing Plants?

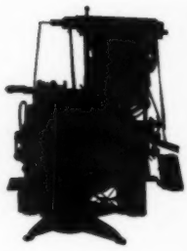
HELP YOUR LITHO PRESS BLANKETS

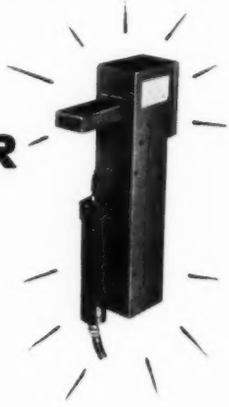
ANPA-RI STUDIES ADMINISTRATION OF LABOR

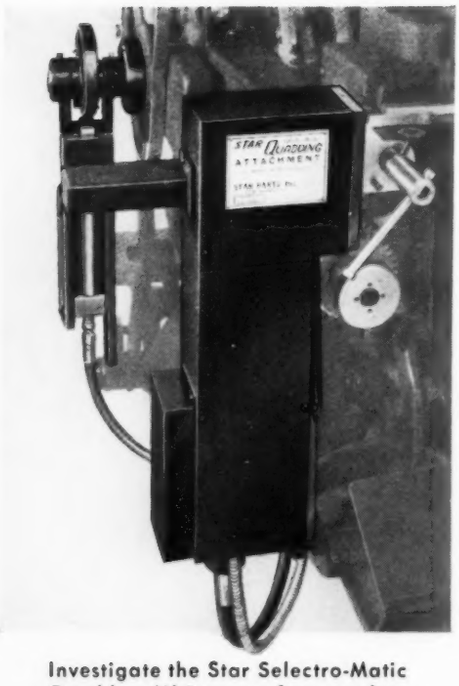
TAGA MEN LOOK AT ELECTRONICS

THE PRODUCTION MAGAZINE FOR PRINTERS AND LITHOGRAPHERS

IF ANY OF YOUR LINECASTING MACHINES HANDLE 2 HOURS OF QUADDED COMPOSITION DAILY YOU SHOULD INVESTIGATE THE STAR SELECTRO-MATIC QUADDER







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. . . and why a *Star* Selectro-Matic Quadder? Because you want the simplest, most dependable, quadding mechanism on the market today! We are so sure that the Star Quadder will satisfy your demands that we offer a 30 day approval installation. Many hundreds of Star Quadders have been installed on this basis and yet not one has been removed because of non-performance. Let the Star Quadder prove, by actual performance, that it can handle your work under your own operating conditions.

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For More Information Circle 168 on Reader Service Card

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Makes possible close register of color mats for R.O.P. or color press production, before plates are cast, through image-to-image comparison of actual printing areas and establishment of accurate register reference points.

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Can be used separately or in conjunction with Master Matcher to pick up accurate register reference points on color mats and trim them uniformly to assure precision register in casting equipment, either hand box or automatic.

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For drying and flat-forming color mats to assure uniform processing during critical registration operations. Can also be used for routine handling of advertising and editorial mats to assure highest quality flat casts. Machine is similar to Master Former in design and operation.

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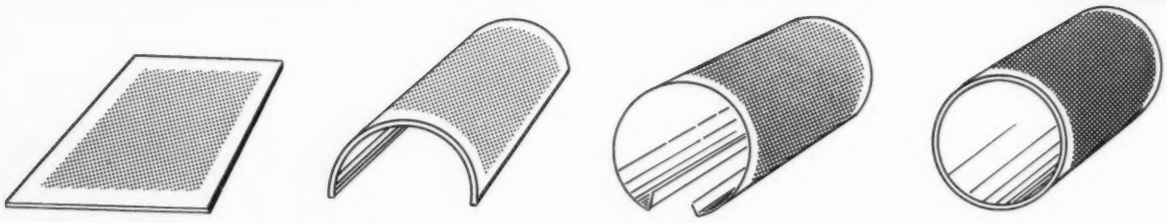
POWDERLESS ETCH ANY OF THESE PLATES IN THE MASTER M-32 with CURVED PLATE ATTACHMENT



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ONLY PRECURVED PLATES ELIMINATE DISTORTION OF IMAGE AND ASSURE ABSOLUTE REGISTER

FEATURES:

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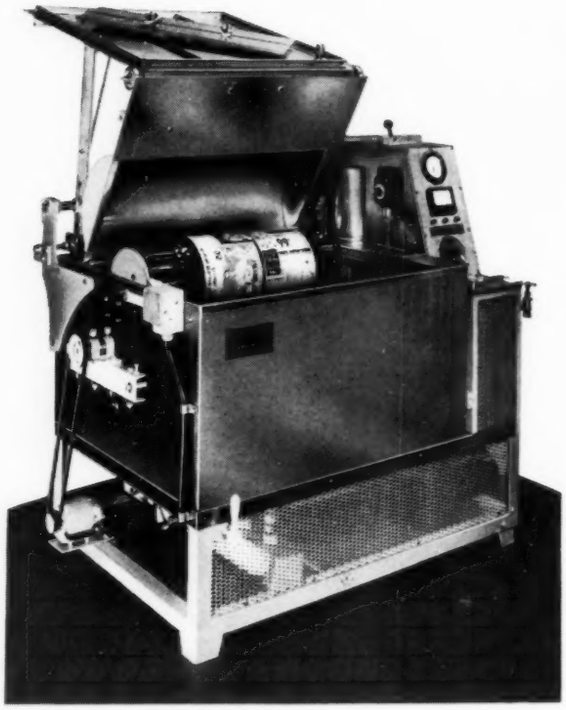

The "CURVED PLATE ATTACHMENT KIT" can be installed on any of the Standard M-32 Powderless Etching Machines in the field.

Other equipment for producing curved engravings up to 20″ in diameter and 43″ wide can be chosen from a standard line of curving, whirling, exposing, developing, and etching machines by MASTER.

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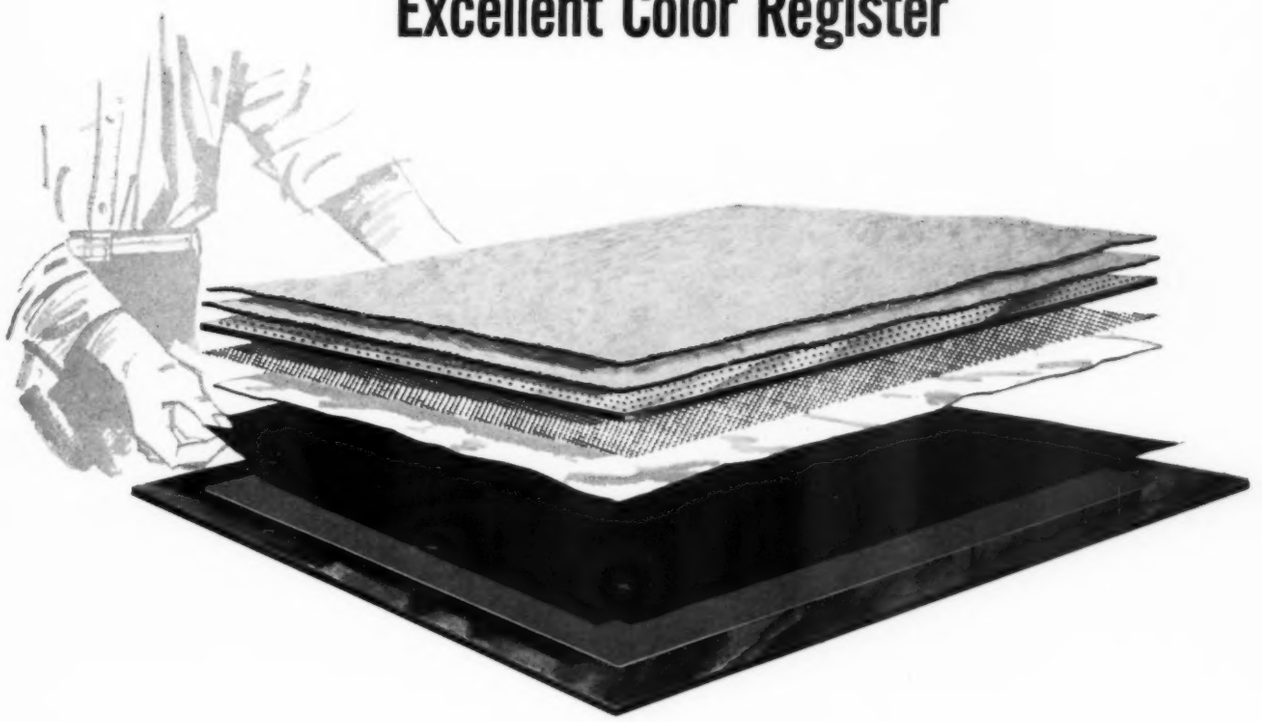
here's how to get top quality stereotype reproduction . . .

High Fidelity Black and White, Excellent Color Register



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For More Information Circle 158 on Reader Service Card

More money is saved and more money is spent by *men in charge of production* than by any other group in the Printing Industry. PRINTING PRODUCTION is edited exclusively for these men.

JULY 1960
VOL. 90, NO. 10

PRINTING PRODUCTION

Published especially for management, production and mechanical executives responsible for printing production and the specification of equipment and supplies used in all major processes of the Graphic Arts industry.

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PRINCIPAL ARTICLES

30 How Much Light is Needed for Graphic Arts Plants?
By ROBERT C. RODGERS

34 ANPA-RI Seeks Ways for Best Administration of Labor
By EDWARD H. OWEN and MacD. SINCLAIR

38 Proper Care, Mounting and Packing Help Litho Blankets
By R. R. LEWIS

40 TAGA Research Men Take Look at Electronics
By JOHN D. HEMMLER

42 Buffalo *News* Goes After Quality in $8 Million Plant
By WILLIAM E. KEIGHTLEY

45 Take Your Pick of Control Systems: Last of a Series
By FRANK MYRICK

54 Construct Your Own Graphic Scaler Device
By HOWARD L. COOK and JOHN F. WILHELM

56 New Adhesive System Adapted for Wrapping Catalogs

REGULAR DEPARTMENTS

Letters to the Editors, 6
News Items, 8
Printing Industry Meetings, 16
Helpful Literature, 26
Overseas Report, 50
Idea File, 62
Patents for Printing Industry, 77
Advertisers' Index, 90
Graphic Views, 92

EQUIPMENT & SUPPLIES

Visual Card Control System, 68
Hand Held Printing Plate Router, 68
Du Pont Bookbinding Material, 68
Paper Plate Clamps for Zenith Presses, 68
Miehle Two Color Offset Press, 68
Photoelectronic Tint Evaluator, 68
Photoengraving Stripping Tables, 68
Tipper-Collator with Variable Speed, 69
Clarendon Series Type Face, 69
Wall Calendar Control Board, 69
Magazine Inserting Machine, 69
Vacuum Scorcher for Mats, 69
Produces Negatives and Transparencies, 69
Ink Compound for Reducing Offset, 70
Friden-Ertma Mail Inserter, 70
Bobst Die Cutter and Embosser, 70
Newspaper Bundle Underwrapper Feeder, 70
Negative Color Proving Process, 70
Meter Records pH Changes, 72
Burning-in Stove, Guillotine, Beveller, 72
Illuminated Magnifying Viewer, 72
Control and Scheduling Board, 74
Machines for Salvaging Stock, 74
Central Cylinder Flexo Printing Press, 74

OUR COVER may lead one to believe we used the sun because it is the month in which millions of Americans will be enjoying it on annual vacations. But Artist Lou Rys points out that the sun is one of printers' greatest sources of light. Either way you wish to think of it, Sol seems to help us present the excellent story on page 30 on printing plant lighting. The two cover pictures were used to provide a contrast between incandescent lighting of 1930 vintage and luminous ceilings which are the newest forms of lighting for modern printing plants. One way you can help your productivity is to check lighting levels in your plant.

LETTERS

TO THE EDITORS

Danger in Standards

I think Collier Elliott and Paul Doebler handled the pros and cons of photographic and hot metal composition very well in the April issue (page 35).

The danger in setting up standards is the emphasis on relatively small changes such as putting copy in a loose-leaf book. Although the time saved here is considerable there still remains a large percentage of nonproductive time on a very expensive machine. Any situation in which the operator is either slower or faster than the machine, calls for separating typesetting into two separate operations—keyboard perforating and automatic casting (or exposing).

If we could arouse the interest of printing management personnel enough to read and listen; if we could get them to speak up when they don't agree; and change conditions when they know a change is needed—if we could accomplish these objectives it would be a lot more fun writing articles.

Frank DeWitt, Assistant Head
Graphic Arts Research Dept.
Rochester Institute of Technology
Rochester, N. Y.

All
in the day's work
at
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Yes, all of L.L.B's famous record papers are available in rolls . . .and what a variety of sizes! . . . rolls from 5½" wide and 10" in diameter, up to 55" wide and 36" in diameter.

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For More Information Circle 24 on Reader Service Card

Appreciation for Support

We want to express our appreciation for the backing you are giving our United Way campaigns. In behalf of the 2100 United Funds and Community Chests from coast to coast, we are delighted with your interest and fine support.

Eli Fox, Director
Press and Magazine Services
United Community Funds and Councils of America
New York, N. Y.

We are indeed grateful to you for the publicity given Lithographic Technical Foundation which has done much to help us in our efforts to improve the lithographic process.

William H. Bulkeley, president
Lithographic Technical Foundation
New York, N. Y.

Something in Every Issue

I read your publication with interest each month and always find at least one article or idea that is of help to someone in our organization.

Rodger W. Lundberg, Vice President
Rotary Press Company
St. Paul, Minn.

We study PRINTING PRODUCTION's Idea File with great interest every month.

Tom Wisloff, Technical Manager
A/S Hjemmet
Oslo, Norway

With great interest we pursued the series of articles in PRINTING PRODUCTION on *Status of Graphic Arts Research* (September 1959 through February 1960 issues). We were very pleased to find credit given the work of our institute and its principal, Professor Dr. E. Rupp.

Wade-Witz, Department Head
Institute for Graphic Technique
Leipzig, East Germany

A Friend Retires

Having passed the three-score-and-ten, plus, span of life, and 60 years in the Graphic Arts field, I retired recently and now travel the avenue of leisure.

During my tenure of activity (37 years) with the *Columbia Magazine*, New Haven, Conn., I derived a great deal of pleasure and knowledge from the printed columns of *Printing Equipment Engineer*, and its successor, PRINTING PRODUCTION.

I miss the deadlines, production dates and the odor of printers' ink, and now must request that we dissolve our association.

Thank you for past favors and continued success with your wonderful publication.

Francis L. Winfield
New Haven, Conn.

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Now you can offer top-quality letterpress color printing with a minimum ink inventory! Speed King's 18 popular colors and black are all you need for nine out of ten jobs, yet they intermix perfectly when the customer demands a special color. Your nearest IPI branch has Speed King in handy 1 and 5 lb. cans . . . ready to do your presses proud!

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NEWS ITEMS

Hughes Acquires Two Printing Firms—The Curtiss Way Div., Eastern Color Printing Co., and the Domonel Press, Inc., Meriden, Conn., have been acquired by Hughes Corporation, New York City. According to a company official, it is the intention of Hughes to further develop the offset printing facilities of the newly acquired firms, in addition to continuing their operations in letterpress web magazine and newspaper supplement printing. The plants will collaborate in work where their interests are mutual.

Officers named by the newly formed Domonel Press, Inc., are: R. Dale Hughes, president; Russell G. Nelson, vice president; Alan S. Holliday, secretary, and Charles I. Rohrlich, treasurer. General manager is to be Dale Hughes; plant manager, Russell Nelson, who has functioned as general superintendent of Curtiss-Way-Domonel since 1943. The Hughes Corporation operates six other plants in the East.

Bendow Named Vice President of Star Parts—Emil Bendow has been elected vice president of Star Parts, Inc. The new vice president joined Star Parts 36 years ago—one year after it was founded. In 1945 Bendow was appointed sales manager and has since established and directed the company's sales policy. As vice president, he will continue to direct the sales policy.

Myrick Assumes New Dexter Post—Frank B. Myrick has been appointed to the newly created post of trade relations manager, Dexter Company, Div. of Miehle-Goss-Dexter, Inc. At Dexter, Myrick will have the responsibilty of maintaining close contact with the industry and its various trade associations. He will also assist, wherever possible, in solving production problems and developing techniques and systems where the firm's line may be utilized. A further responsibility will be the editing of the Dexter *Digest*.

Ludlow

Offers Many of the Larger Sizes

The Ludlow-equipped composing room can have large type sizes essential for important news heads and advertising display. They are cast from Ludlow matrices as needed, assuring a type supply for continuous production.

Only on the Ludlow are large sizes readily obtainable in slug-form. Attractive Ludlow typefaces such as these are available up to and including 84 and 96 point—

Bodoni Bold and Bodoni Campanile
Gothic Bold Condensed Title and Condensed Gothic
Franklin Gothic ("Ludlow" above in 84 point)
Franklin Gothic Extra Condensed
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Tempo Heavy and Heavy Condensed

Only the Ludlow affords complete flexibility and display type sizes ranging from 12 point to 96 point, without machine or mold changes. Write for specimen sheets.

LUDLOW TYPOGRAPH CO.
2032 Clybourn Avenue, Chicago 14

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BENDOW

MYRICK

Myrick's headquarters will be at the Dexter plant in Pearl River, N. Y.

Prior to his association with Dexter, Myrick was editor of *Book Production* magazine for 18 years. He is author of a textbook, *A Primer in Book Production*, and was Eastern editor for PRINTING PRODUCTION magazine.

Fairchild Midwest Representatives—Fairchild Graphic Equipment, Inc., has appointed Richard P. Campbell, Lawrence D. Whitcomb and Gilbert Kurek to the positions of customer engineers in the Midwest. Campbell will cover Illinois, Wisconsin, and parts of Indiana, Kentucky, Missouri and Arkansas. Whitcomb's area includes Illinois, Michigan and Wisconsin; Kurek's section encompasses Ohio and Michigan. The three men will serve Scan-A-Graver and Scan-A-Sizer users.

Purchase Cleveland Printing Firm—Oliver F. Emerson, II, and Robert L. Wing have announced their purchase of Schonberg Printing Co., Cleveland. Under its new ownership, the company will operate as The Emerson Press, Inc. Emerson, former sales manager of Tower Press, Cleveland, is to serve as president and treasurer; Wing, formerly associated with Buehler Printcraft Corp. and Steingass Lithograph, Inc., Cleveland, is to be sales manager.

EMERSON

NOEL

Noel Appointed by Wausau—P. J. Noel has been appointed to the sales service and converting sales staff of Wausau Paper Mills Co. Previous to his joining Wausau in 1954, Noel had worked extensively in printing production.

George S. Dively Honored—*Graphic Arts Education* magazine has dedicated its spring issue to George S. Dively, chairman and president of Harris-Intertype Corp., for his "interest in the educational

NEWSPAPER PLANTS, MAGAZINE PUBLISHERS AND LITHOGRAPHERS . . .

increase production with

WOOD REELS, TENSIONS and AUTOPASTERS

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Typical installation of WOOD fully automatic Reels, Tensions and Autopasters, custom-built to handle any kind of roll stock.

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progress of the printing and publishing industry." The magazine is published jointly by the Education Council of the Graphic Arts Industry and the International Graphic Arts Education Assn. Among Dively's efforts in the field of education is his membership on the board of trustees of Case Institute of Technology, Cleveland.

Inland Newspaper Supply Moves—Inland Newspaper Supply Co. has moved to larger facilities at 1720 Cherry St., Kansas City, Mo. The new building covers 25,000 sq. ft. and approximately doubles the size of the former location.

Pneuma-Flo Sales Engineer—Herbert L. Taub has been appointed sales engineer of Pneuma-Flo Systems, Inc. He has had extensive experience in the field of printing inks through his former associations with the IPI Division, Interchemical Corp., and Sinclair and Valentine Co.

To Direct Intertype's Export Sales — Thomas Martin has been appointed director of export sales for Intertype Company, Div. of Harris-Intertype Corp. For the past nine years, Martin has been Southern district manager for Intertype. He succeeds Frank Hoffman, who plans to retire in the near future.

MARTIN

BUCKELEW

Intertype Appoints Service Manager — John R. Buckelew has been appointed service manager of Intertype Company, Div. of Harris-Intertype Corporation. For the past three years, Buckelew has been a member of the production and engineering division staffs of the *Wall Street Journal*. He has also served on the staffs of the Daytona Beach (Fla.) *News-Journal*, Providence (R. I.) *Journal-Bulletin*, Boston *Globe*, Detroit *News* and Newark (N. J.) *Evening News*.

Montreal Typographer Announces Change—The following changes in supervisory personnel have been announced by McLean Brothers, Ltd., Montreal, Can.: Gordie Lafleur has been appointed plant superintendent; Maurice Banville, general foreman; Frank Battisto and Murray Mclellan, advertising typography heads; Marcel Brabant and Dominic Battisto, commercial typography heads; Yvon Villeneuve, photo typography head; and Carl Halchuk, in charge of art and layout.

Elected Chairman of Regan Industries—George P. Regan, Jr., has been elected chairman of the board of Regan Industries, Inc. He succeeds the late G. P. Regan, Sr. The new chairman will continue to serve the company as president.

Milton J. Heiberg, Sr., Dies—Milton J. Heiberg, Sr., partner in the Brooklyn Press, Brooklyn, N. Y., died May 11, at his home in Centerport, L. I., N. Y. A compositor by trade, Mr. Heiberg became associated with Brooklyn Press in 1933. He was actively associated with Printing Industry of America Management conferences, with the New York Employing Printers' Assn., and the New York Typographical Union No. 6.

Strong Electric Official Retires—Harold E. Brown of Strong Electric Corp. has announced his retirement. Brown joined Strong Electric in 1935 and was elected vice president, sales in 1954.

Arnold Cited for *S&S* Work—A certificate of appreciation for patriotic civilian service has been presented to Edmund C. Arnold, director of trade relations and editor of the *Linotype News* for Mergenthaler Linotype Co. The award was made to Arnold by the Department of the Army for his service as a typographic consultant to the European edition of

Walter A. Metz, foreman of the Patriot-Evening News Engraving Department, says, "We are using the Imperial Vitaplate-VitasolV powderless etching team for over 50,000 line and halftone engravings annually. Our line etchings run from a depth of .036 to .042, eliminating all routing."

Newspapers all over the country are obtaining amazing results with this team — how about you? Investigate Imperial's Photoengraving Engineering Service for data on both equipment and supplies without obligation.

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- **DURAPLATE**
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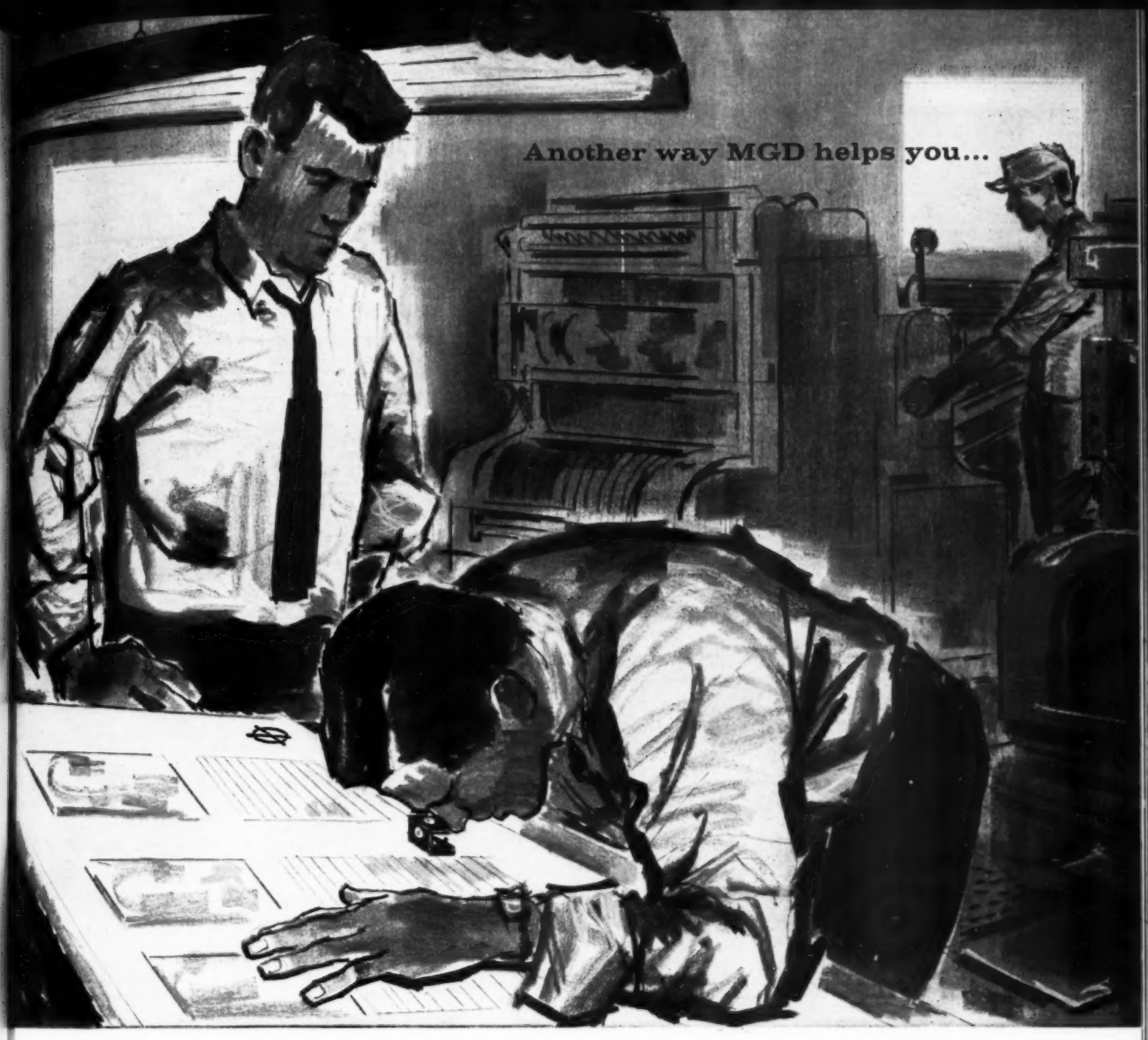

Hold Register At Any Speed! Don't waste time and paper when changing speeds on precision color jobs!

Only Miehle's Swing Gripper Transfer System assures exact register *at any speed*. On the Miehle 25, 29 and 36 Single Color Offset Presses —in fact, on all Miehle Offsets—you makeready at slow speed...run the press up to production speed...*register holds*. The same is true on jobs where different colors must be run at different speeds...*register holds*.

Don't let constant adjusting and readjusting rob you of valuable production time and profits. Holding register at any speed pays off ...so make arrangements now to see a Miehle 25, 29 or 36 Offset Press in actual operation.

THE MIEHLE COMPANY
Division of Miehle-Goss-Dexter, Inc.
Chicago 8, Illinois

MGD

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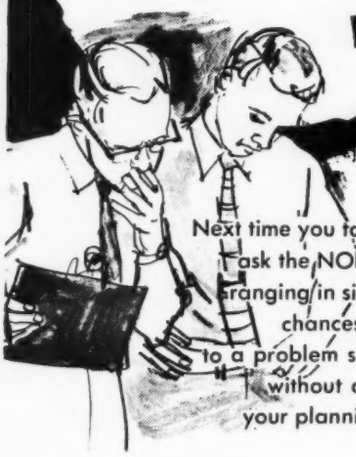
a perfect team—
YOU and the
NOLAN man

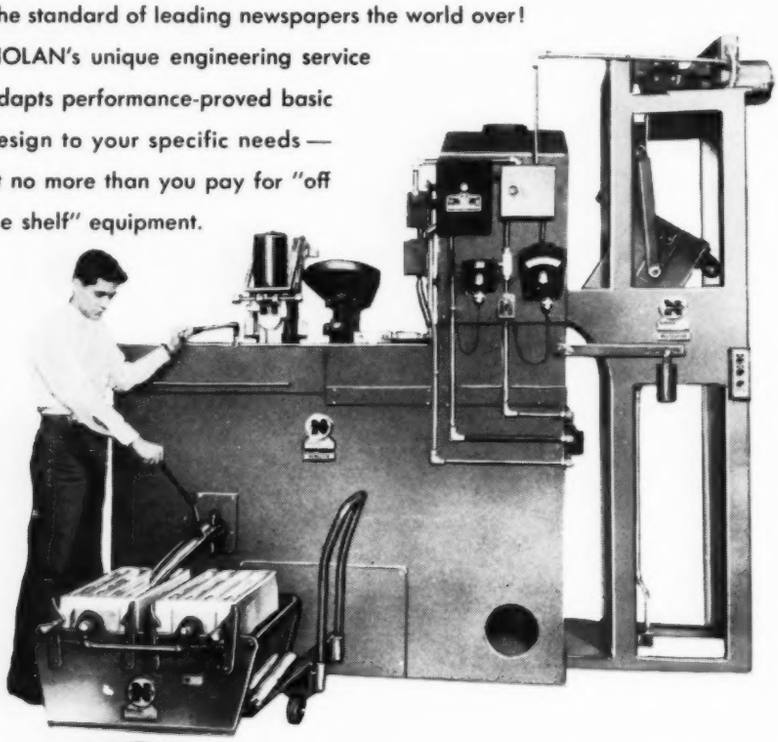


Next time you take a close look at your remelting operation, ask the NOLAN man to call. He's worked on remelt systems ranging in size from less than one ton to 70 tons — and chances are he's already come up with the right answer to a problem similar to yours. His suggestions, yours without cost or obligation, could prove invaluable in your planning. A letter or phone call will bring him to you.

NOLAN REMELTER and MELTEVATOR—ANOTHER PERFECT TEAM!

The standard of leading newspapers the world over!

NOLAN's unique engineering service adapts performance-proved basic design to your specific needs — at no more than you pay for "off the shelf" equipment.



WRITE TODAY

for full information on NOLAN's "design for savings" ... a modern remelt installation for your paper's needs.

NOLAN

For More Information Circle 197 on Reader Service Card

Stars & Stripes, the service newspaper. Arnold served with S&S during World War II.

Miehle Midwest Service Manager—Martin S. Hansen has been promoted to the position of Midwest service manager of Miehle Company, Div. of Miehle-Goss-Dexter, Inc. Hansen will make his headquarters at the firm's general offices and plant, 2011 Hastings St., Chicago. He will be responsible for erecting and servicing all Miehle equipment in: Minnesota, Wisconsin, Illinois, Indiana, Ohio, Michigan, Kentucky, Missouri, Oklahoma, Iowa, Arkansas, Louisiana, Texas, Eastern Nebraska and Eastern Kansas. Assisting Hansen will be Roman V. Pinda, dispatcher.

HANSEN

HILGOE

Goss Names Assistant Chief Engineer—Vernon J. Hilgoe has been appointed assistant chief engineer of Goss Company, Div. of Miehle-Goss-Dexter, Inc. In his new position, Hilgoe will be responsible for matters related to designing and engineering in the areas of newspaper, magazine and rotogravure presses. Hilgoe joined Goss in 1936 as a draftsman and designer, later serving as group supervisor and supervisor of special designs.

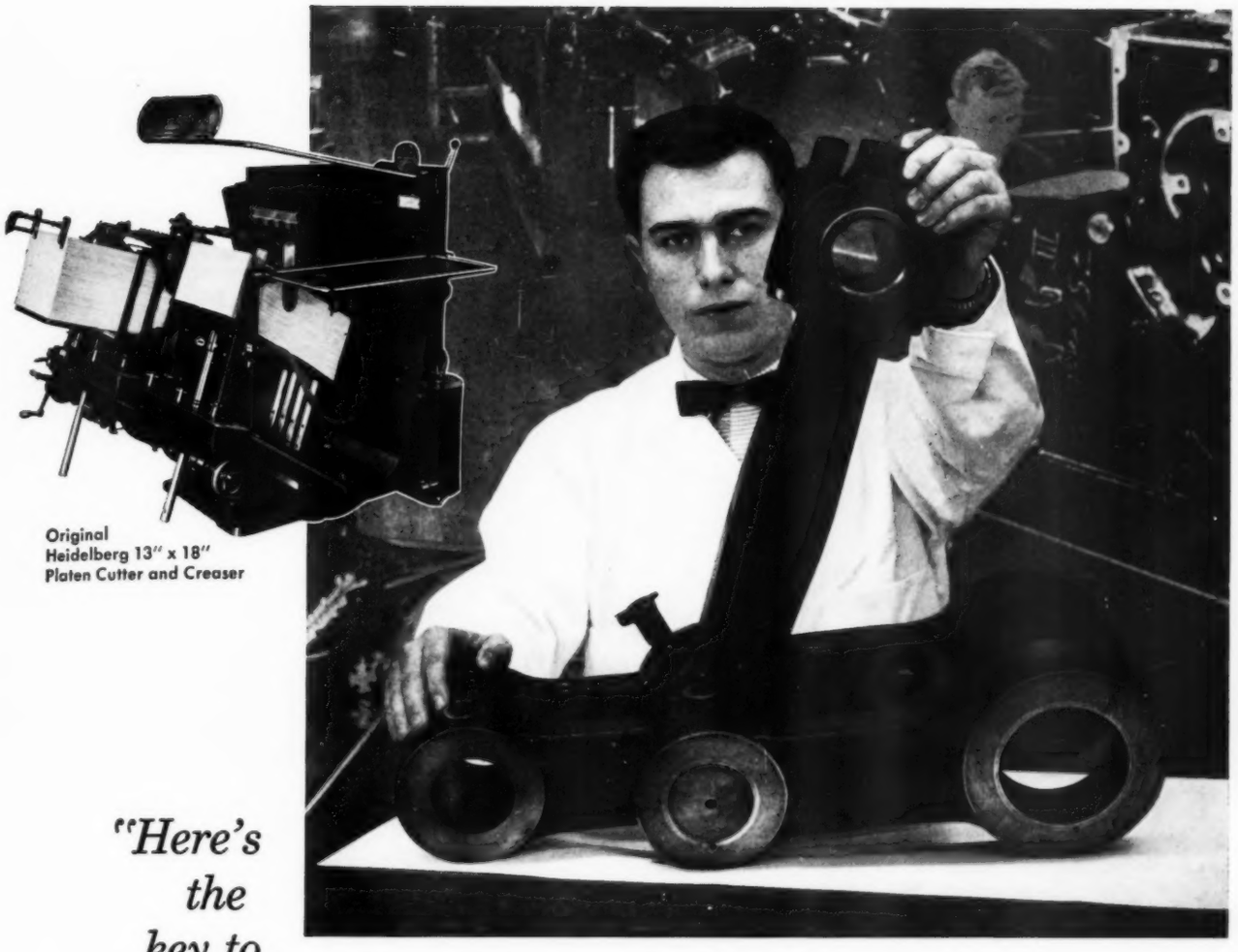
Donohue Joins Anchor Chemical—James Donohue has joined Anchor Chemical Co., Inc., as sales service manager. Previously, Donohue was associated with Printing Ink Div., Interchemical Corporation.

Regensteiner Elects New President—Ted Winter has been elected to the presidency of Regensteiner Corporation, Chicago. He

T. WINTER

I. WINTER

succeeds his father, Irving Winter, who retains the position of chairman of the board. Irving Winter has been associated with the printing and lithographic firm for 45 years, serving as president since 1952. Ted Winter, who is also president



Original
Heidelberg 13" x 18"
Platen Cutter and Creaser

"Here's the key to profitable cutting and creasing...

...This toggle drive on the Original Heidelberg Platen Cutter and Creaser delivers up to 60 ton impression at any speed up to 4000 iph!"

This is just one significant advantage over side arm presses. In addition, the amount of pressure delivered never varies despite changes in running speed. And the Heidelberg has up to 4 to 6 times longer dwell on impression. Advantages like these result in cleaner and sharper cutting and creasing, even on heavier board. And dies stay sharper longer.

Other special design features make it possible to set up the press quickly and accurately. Automatic and positive sheet control from feed to delivery... hairline registration... and the ease of positioning makeready behind the form – advantages like these simply mean you can get your work on press faster. Once on, you'll run off higher quality work at higher speeds. And the shear pin safety factor prevents any damage through overload.

For long or short run work – on die cutting, embossing, cutting, creasing, scoring, or perforating – you'll find an ORIGINAL HEIDELBERG as profitable as it is dependable. Your local Heidelberg representative will be glad to give you all the facts.

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"Jobs get on and off faster far more profitably with Heidelberg Cutters and Creasers"

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of Childrens Press, Inc., Sub. of Regensteiner, has been with the firm 21 years.

Gothe Named Baltimore Manager—Don W. Gothe has been appointed manager of the Baltimore division of Bingham Bros. Div., Sam'l Bingham's Son Mfg. Co. The new manager has had 14 years experience in the Graphic Arts and will direct sales and service activities in Maryland, Virginia and the Washington, D. C., area.

GOTHE

ANDERSON

Appointed to Pitman Sales Staff—It has been announced that Maurice D. Anderson has been appointed to the sales staff of Harold M. Pitman Co. Anderson will maintain his headquarters in Omaha, Neb.

San Francisco Equipment Firm Expands—The William M. Kemp Co., equipment dealers has moved from 915 Bryant St. to expanded quarters at 1245 Howard St, San Francisco.

New Era Elects Officers—Horace C. Lockwood has been named chairman of the board; C. Richard Fairlamb, president, and William C. Atkins, treasurer of the New Era Manufacturing Co. The election announcement was made in conjunction with the firm's 60th anniversary, this year. Formerly, Lockwood served as president; Fairlamb as treasurer and general manager, and Atkins as vice president-finance.

LOCKWOOD

FAIRLAMB

ATKINS

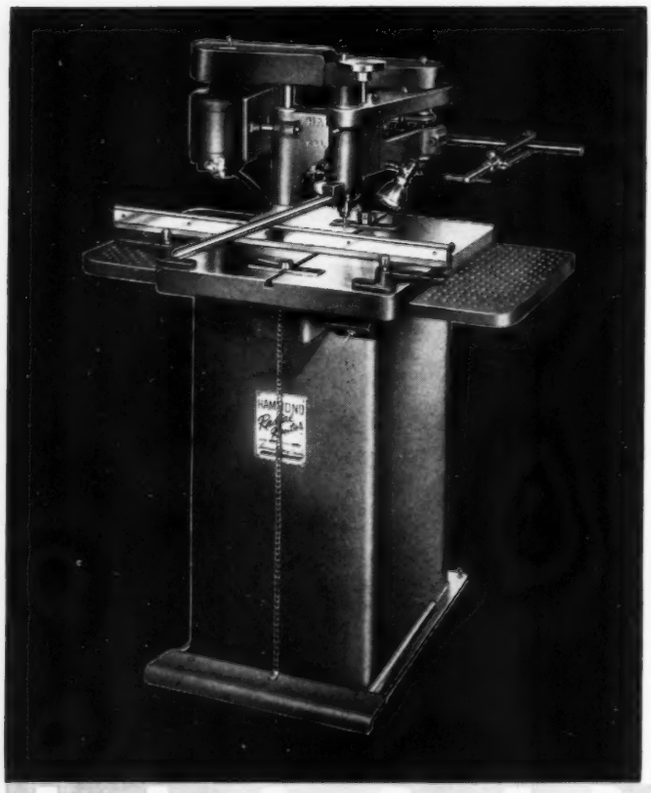
Western Representative for Photon — Charles W. Parsons has been appointed Western sales representative for Photon, Incorporated. From his headquarters at 2030 Marengo Ave., S. Pasadena, Calif., Parsons will cover the eleven states west of the Rocky Mountains. Formerly, he was associated with Monsen Typographers, Los Angeles.

Finch, Pruyn Technical Director—It has been announced that Guenter Herwig has been named technical director of Finch, Pruyn and Co., Inc. Herwig is a graduate of O. V. Miller Polytechnic Institute, Munich, Germany, and has served the paper company as a technician and a development engineer. In his new post, Herwig will be in charge of technical control of paper manufacturing.

Azoplate Representative—Walter D. Rogowsky has been appointed technical sales representative in the Washington, D. C.-Baltimore area by Azoplate Corporation. Formerly, Rogowsky represented Azoplate in the New Jersey area.

Frank T. Millis Dies—Frank T. Millis, founder and president of Dugan Millis, Inc., Cleveland printing firm, died June 12 at the age of 69. Mr. Millis had been associated with the printing industry for 43 years. He moved to Cleveland in 1921 and founded Dugan-Millis in 1940 with the late Norman Dugan.

Open New Screen Process Plant—Sirocco Screenprints has announced the opening of its new screen process printing plant, 376 State St., New Haven, Conn. The



Hammond Radial Router

The Hammond Radial Router is the best router at a medium price. Only the Hammond R-4 offers the belt driven ball bearing spindle with a ½ HP constant speed motor. Full newspaper page capacity, routes both shell and type-high plates plus mortising shell plates. Priced completely equipped with motor, clamps, lights, grilled shelves and router bit grinder. The ideal stereo router for non-metropolitan newspapers and printers.

HAMMOND

HAMMOND MACHINERY BUILDERS • KALAMAZOO, MICHIGAN

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A NEW SCOTT INSTALLATION

AND THE MAIL TRIBUNE IS READY FOR **TOMORROW**

THE MAIL TRIBUNE, MEDFORD, OREGON, SAYS . . .

"Primary objective of our new installation was to meet our volume of business, eliminate as much manual work as possible and provide for future growth and expansion with a minimum of additional expense.

We chose the color couple, or half-deck, because of the flexibility for printing color from the three units. We decided to place the press on substructure and provide room to increase capacity for three additional units."

If you are modernizing or rebuilding your plant, SCOTT would like to submit specifications for an installation of any size, designed to suit your needs. Let a SCOTT engineer help you plan the most efficient way to lay out your plant.

WALTER SCOTT & CO.

SCOTT presses

DIVISION OF WOOD NEWSPAPER MACHINERY CORPORATION Plant: Plainfield, N. J.
EXECUTIVE & SALES OFFICE: 501 FIFTH AVENUE, NEW YORK 17, NEW YORK

SCOTT, high-speed, 3-unit press with 3/2 ratio folder, reversible color couple and reversing drives on printing units for spot and multi-color printing.

The Mail Tribune publishes five afternoons and Sunday with a total weekly circulation in excess of 105,000 papers. Color is available in all editions. A new pressroom containing over 3000 square feet has been erected and the stereotype department, mail room and paper storage area entirely remodeled.

For More Information Circle 156 on Reader Service Card

new facilities consist of a one story building of 7500 sq. ft., located on a 3 acre plot. Formerly, the company was located in the Westfield section of New Haven.

H. B. Rouse Founder Dies—Walter A. Sittig, one of the founders of H. B. Rouse & Co., died May 7. Mr. Sittig was a member of the Board of Directors of the National Printing Equipment Assn. and served his company as secretary for the last 62 years.

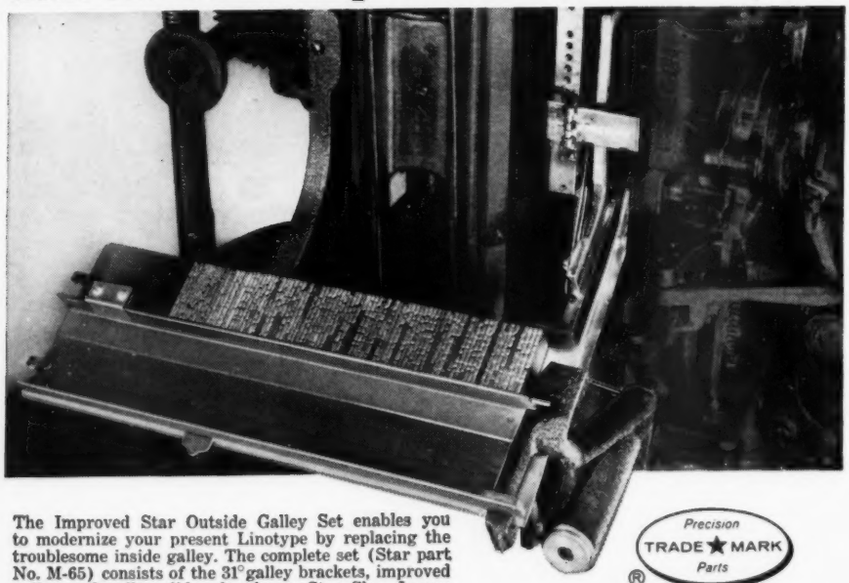
Detroit Printing Firm Moves—Printing Service, Inc., Detroit, has been moved to new and larger quarters at 17131 Filer. According to Martin J. Struhar, president, the new building has 36,000 sq. ft. of floor space and more than doubles the productive capacity of the former quarters.

Thomas Collator Regional Manager—J. R. Lee has been appointed regional sales manager for Thomas Collators, Inc. Lee will direct sales in the East Central and Southwest areas. Formerly, he was associated with the A. B. Dick Duplicating Products Div., Stewart Office Supply Co.

Cleveland Printing Executive Dies—Robert B. Calvert, president of two Cleveland printing firms, died June 13 at the age of 51. He was head of the Calvert-Hatch Co. and the Reserve Lithograph & Printing Co.—both of which headquarter in Cleveland and have branches in Detroit, Buffalo, N. Y., and Toledo, O. Mr. Calvert assumed the presidency of the two firms in 1941 after the death of his father, Percy N. Calvert, founder of both companies.

Modernize your Linotype...

with the STAR Improved Outside Galley Set

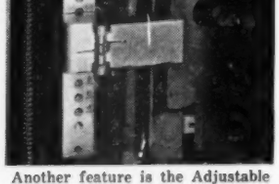


The Improved Star Outside Galley Set enables you to modernize your present Linotype by replacing the troublesome inside galley. The complete set (Star part No. M-65) consists of the 31° galley brackets, improved galley and galley slide, slug lever, Star Slug Jogger and Improved Slug Trip and Buffer.

Precision TRADE ★ MARK Parts ®

When the galley of the Star Galley Set is full, the slide engages with a special hook which prevents it from falling to the floor.

The Star Slug Jogger provides positive slug stacking since it is actuated by the uniform rise of the first elevator slide. A spring acts as an over-throw safety to prevent machine damage should there be any interference in slug movement.



Another feature is the Adjustable Slug Trip and Buffer. A hinged gate, with leather buffer on the slug side, is adjustable vertically so that it can be set to trip any length slug. This assures smooth slug delivery to the galley. The hinge opens easily to clear jams.

Write today for literature on the Star Outside Galley Set. No obligation, of course.

Precision TRADE ★ MARK Parts ®

STAR PARTS, Inc.

SOUTH HACKENSACK, N. J.

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MEETINGS for the PRINTING INDUSTRY

American Photoengravers Assn.—1960 Conv., Hotel Statler, Buffalo, N. Y., Oct. 9-12. Exec. Secy. Frank J. Schreiber, 166 W. Van Buren St., Chicago 4.

ANPA-RI Mechanical Conf.—1961 Conf., Palmer House, Chicago (dates to be announced). Mgr. Richard L. Lewis, ANPA-RI Mechanical Dept., 750 Third Ave., New York 17.

Book Manufacturers' Institute — 1960 Conf., Boca Raton Hotel, Boca Raton, Fla., Oct. 19-22. Secy. Miss A. G. Watson, 25 W. 43rd St., New York 36.

Fifth District Craftsmen's Conf.—Secy.-Treas. George W. Thompson, Toledo Colortype Co., 1711 Jefferson Ave., Toledo, O.

Flexographic Technical Assn.—1961 Meeting, Hotel Roosevelt, New York, Feb. 9-10. Exec. Secy. Julian Ross, 220 W. 42nd St., New York 36.

Graphic Arts Assn. Executives—1960 Fall Meeting, Washington, D. C., Oct. 21-22, Secy.-Treas. Thomas J. Curran, Exec. Secy. Label Mfrs. Natl. Assn., Inc., 1025 Connecticut Ave., N.W., Washington 6, D. C.

Gravure Technical Assn.—1961 Conv., Hotel Drake, Chicago, Mar. 8-10. Exec. Secy. Edward S. St. John, Room 4800, 30 Rockefeller Plaza, New York 20.

Great Lakes Mechanical Conf.—1961 Conf., Hotel Gibson, Cincinnati, Jan. 22-24. Secy. John E. Innis, R. R. No. 1, Box 546, Indianapolis 27, Ind.

Illinois Newspaper Mechanical Conf.—1960 Conf., St. Nicholas Hotel, Springfield, Ill., Oct. 29-30. Secy.-Treas. Arthur Kramer, Joliet (Ill.) *Herald-News*.

Intl. Assn. of Electrotypers & Stereotypers, Inc.—1960 Conv., Continental-Hilton Hotel, Mexico City, Mexico, Oct. 23-26. Exec. Secy. Floyd C. Larson, 758 Leader Bldg., Cleveland 14.

Intl. Assn. of Printing House Craftsmen—1960 Conv., Hotel Biltmore, Atlanta, Aug. 7-10. Exec. Secy. Pearl E. Oldt, 411 Oak St., Cincinnati 19.

Intl. Graphic Arts Education Assn. — 1960 Conf., University of Houston, Houston, Aug. 18-23. Exec. Secy. Samuel M. Burt, 5728 Connecticut Ave., N.W., Washington 15, D. C.

Intl. Printers Supply Salesmen's Guild—1960 Meeting, Biltmore Hotel, Atlanta, Aug., 5-6. Secy. Harry Deck, 75 E. Wacker Dr., Chicago.

Intl. Typographic Composition Assn.—1960 Conv., Hotel Statler Hilton, Dallas, Oct. 19-22. Exec. Secy. McKinley M. Luther, Washington Bldg., 15th St. and

(*Continued on Page 22*)

YOU CAN SHOW YOUR TRUE COLORS ON

HAMMERMILL OFFSET

For greater depth in the colors you use, take advantage of Hammermill Offset's bright, luminous whiteness. Your reproductions will sparkle. So will your customers' eyes. Hammermill Offset is great for black and white, too. Turn the page and see.

This is Bill Richards of Cleveland. As a commercial photographer, Mr. Richards has created thousands of advertising product pictures. He's responsible also for the imaginative excursion into color photography on the front of this insert.

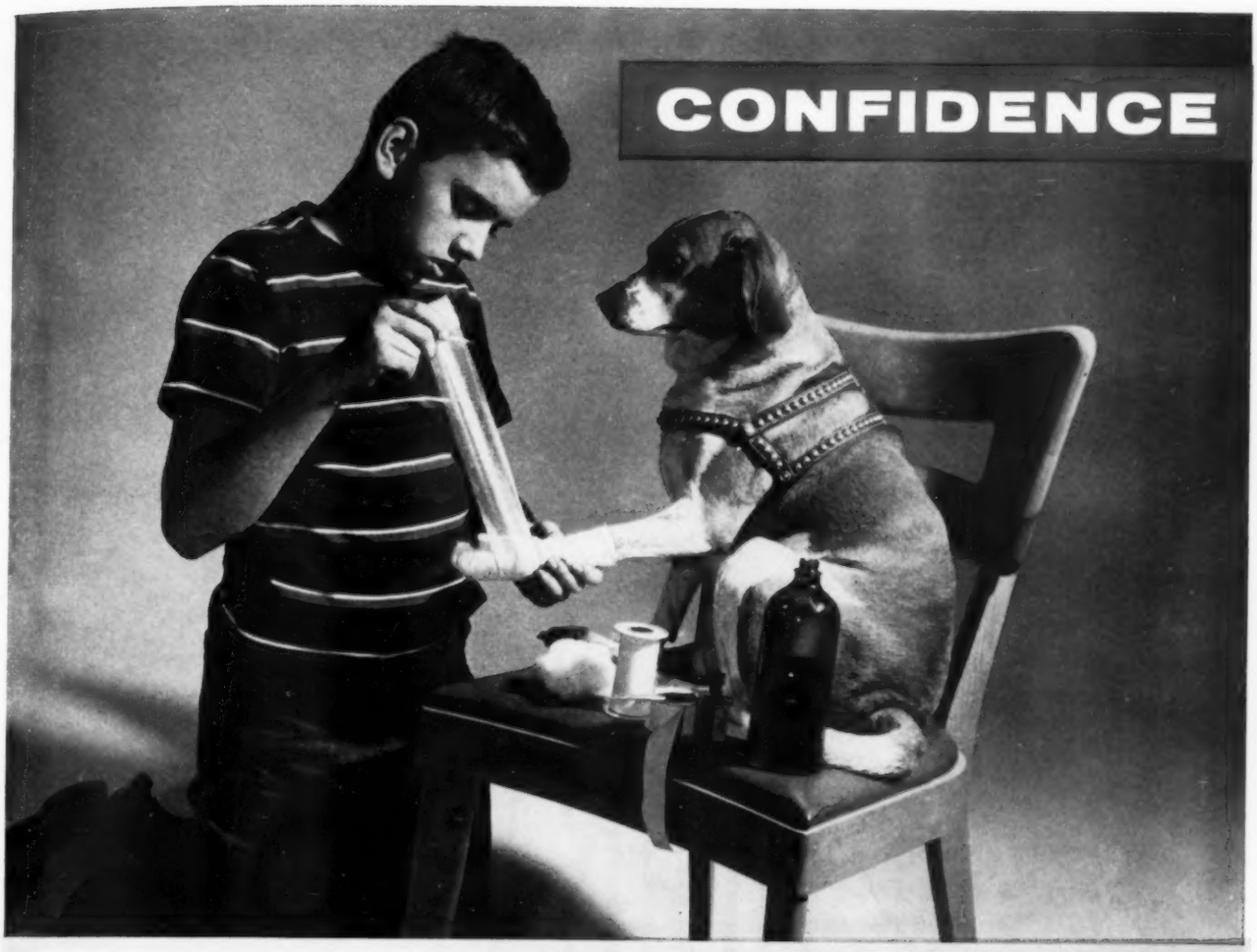
HAMMERMILL OFFSET REFLECTS A PRODUCT'S QUALITY

Photographers like to see their work printed on Hammermill Offset because its extremely high reflectance assures more pleasing contrasts, more faithful reproduction of colors or black and white.

Printers like to print on Hammermill Offset because colors stay on top—bright, forceful—and because Hammermill Offset stays in accurate register.

You'll like Hammermill Offset in any of the 8 finishes and 7 cheerful colors in Vellum finish. This specimen printed by offset on substance 70, Wove finish on a 25 x 38 two-color press. Sheet size 25½ x 38, eight up. Speed 4000 per hour. Colors printed yellow, blue, red, black.

Hammermill Paper Company, Erie, Pennsylvania.



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AT LEADING PAPER MERCHANTS EVERYWHERE
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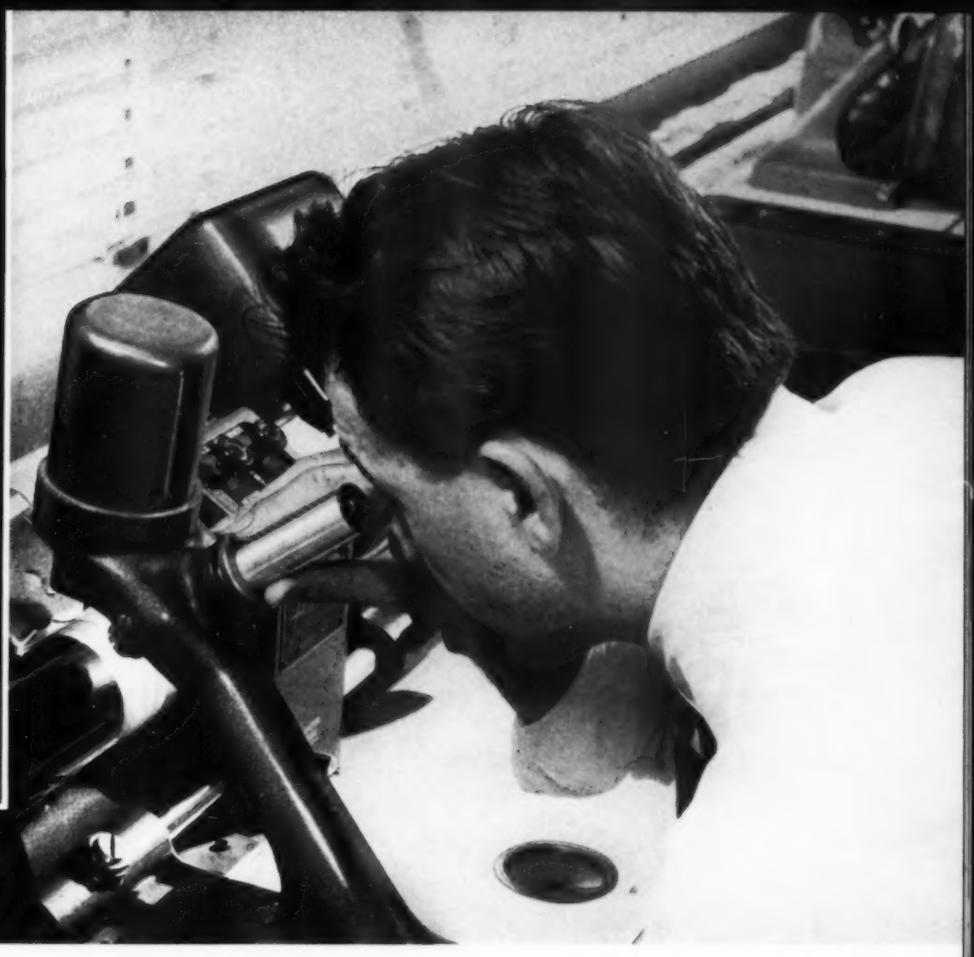
Exclusive Fairchild Stroboscopic Microscope enables operator to make adjustments, during setup process, that result in engravings with clean, sharp halftone dots, as shown here highly magnified.



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An *extra* aid to quality in engravings made on Fairchild Scan-A-Gravers® and Scan-A-Sizers® is the *exclusive* Fairchild Stroboscopic Microscope. With its help, the operator can easily make adjustments during the setup stage of the engraving process to reproduce the exact tones of the original copy. This exclusive Fairchild feature assures a "high-fidelity" engraving every time.

That's one reason why, whether you print direct or mat, Fairchild engravings help you achieve presswork results you can be proud of . . . results that do full credit to your craftsmanship.

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Fairchild engravings are produced on Scan-A-Plate®, a specially formulated, low-cost engraving material. These engravings are tough, resilient, and have excellent ink-transfer qualities. They are easy to handle, easy to silhouette and trim, easy to attach directly to curved stereos for direct printing. They can be matted and easily mounted for flatbed printing.

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Meeting Dates

(Continued from Page 16)

New York Ave., N.W., Washington 5, D. C.

Iowa Newspaper Mechanical Conf.—Secy.-Treas. Paul F. Kamler, Mechanical Supt., Clinton, (Ia.) *Herald.*

Lithographers and Printers National Assn.—1961 Conv., Arizona Biltmore, Phoenix, Ariz., Apr. 30-May 5. Dir. Oscar Whitehouse, 1025 Connecticut Ave. N.W., Washington 6, D. C.

Mid-Atlantic Newspaper Mechanical Conf.—1961 Conf., Pittsburgh, (dates in March and Hotel to be announced). Gen. Mgr. G. Richard Dew, 2717 N. Front St., Harrisburg, Pa.

National Assn. of Litho Clubs, Inc.—1961 Conv., (hotel to be announced), Dayton, O., May 4-6. Exec. Secy. Raymond E. Geegh, 1915-33rd St. S. E., Washington 20, D. C.

National Assn. of Photo-Lithographers—1960 Conv., Conrad Hilton Hotel, Chicago, Oct. 5-8. Exec. Dir. Walter E. Soderstrom, 317 W. 45th St., New York 36, New York.

National Paper Trade Assn.—1960 Conf., Conrad Hilton Hotel, Chicago, Sept. 19-21. 1961 Conf., Waldorf Astoria, New York, Mar. 26-29. Exec. Secy. O. Glenn Leach, 220 E. 42nd St., New York 17.

National Printing Equipment Assn., Inc.—1960 Meeting, Sheridan-Park Hotel, Washington, D. C., Oct. 25-26. Exec. Secy. Harry L. Gage, 140 Nassau St., New York 38.

National Safety Council Printing and Publishing Section—1960 Meeting, Conrad Hilton Hotel, Chicago, Nov. 18. Staff Rep. Harry C. Johnson, National Safety Council, 425 N. Michigan Ave., Chicago 11.

New England Daily Newspaper Composing Room Executives Assn.—Exec. Secy. Lewis R. Greene, Westerly (R.I.) *Sun.*

New England Newspaper Mechanical Conf.—1960 Conf., Hotel Statler-Hilton, Boston, Oct. 15-16. Secy.-Treas. Walter C. Crighton, New London (Conn.) *Day.*

New York State Capital District Mechanical Conf.—Conf. Dir. Floyd Laurenty, Albany (N. Y.) *Times-Union.*

Newspaper ROP Color Conf.—Secy. Arthur Brashears, American Assn. of Newspaper Representatives, 141 E. 44th St., New York.

Northwest Mechanical Conf.—Secy.-Treas. Ralph N. Carson, Dunwoody Industrial Institute, 818 Wayzata Blvd., Minneapolis.

Pacific Newspaper Mechanical Conf.—1960 Conf., Multnomah Hotel, Portland, Ore., Sept. 23-25. Secy. Donald Newhouse, Portland (Ore.) *Oregonian.*

Packaging Institute Assn.—1960 Meeting, Hotel Statler, New York, Oct. 31-Nov. 2. Exec. Dir. Chas. A. Feld, 342 Madison Ave., New York 17.

Printing Industry of America—1960 Conv., Hotel Sheraton Park, Washington, D. C., Oct. 24-27. Gen. Mgr. Bernard Taymans, 5728 Connecticut Ave. N. W., Washington 15, D. C.

Research and Engineering Council — 1961 Meeting, Hotel Fort Des Moines, Des Moines, Ia., May 22-24. Managing Dir. Robert E. Rossell, 5728 Connecticut Ave. N.W., Washington 15, D. C.

Screen Process Printing Assn., Intl.—1960 Conv., Hotel Sherman, Chicago, Nov. 11-13. Exec. Secy. Robert H. Blundred, 549 W. Randolph St., Chicago 6.

SNPA (Eastern Div.) Mechanical Conf.—1960 Conf., Hotel Dinkler-Tutwiler, Birmingham, Ala., Aug. 14-16. Secy. Walter C. Johnson, Jr., P. O. Box 1569, Chattanooga 1, Tenn.

SNPA (Western Div.) Mechanical Conf.—1961 Conf., Hotel Adolphus, Dallas, Mar. 5-7. Secy. Claude V. Capers, P. O. Box 1569, Chattanooga 1, Tenn.

Southern Graphic Arts Assn. — Secy. Charles E. Kennedy, 1514 South St., Nashville 2, Tenn.

Technical Assn. of the Graphic Arts—1961 Conf., Deshler-Hilton Hotel, Columbus, O., June 12-14. Secy.-Treas. Cyril A. Horton, Research Laboratories, Eastman Kodak Co., Rochester 4, N. Y.

LOAD
Lift the glass, position the negative and plate.
FLIP
Close the glass frame. Pull the release knob and flip the vacuum frame over.
EXPOSE
Set the timer. Automatically controlled carbon arc lamp is built into the base with the reflector.

Load—Flip—Expose

Three steps to faster platemaking!

nuArc flip-top

PLATE MAKER

If floor space is at a premium in your plant or office, then you have just one more good reason for owning a nuArc flip-top platemaker.

Flip-tops take up a floor space just a few inches larger than the actual size of the plate. No partitions or curtains are necessary because the light from the powerful arc lamp is contained within the cabinet.

The combination of compactness, simple controls, automatic operation, and perfectly balanced revolving top makes it easy for skilled or unskilled personnel to make perfect plates every time.

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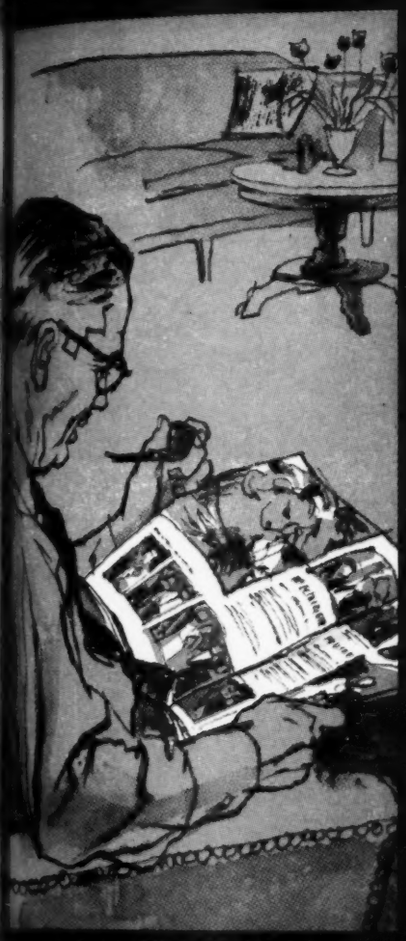
For More Information Circle 138 on Reader Service Card

for basic communication

NEWSPAPERS / MAGAZINES / PRINTING

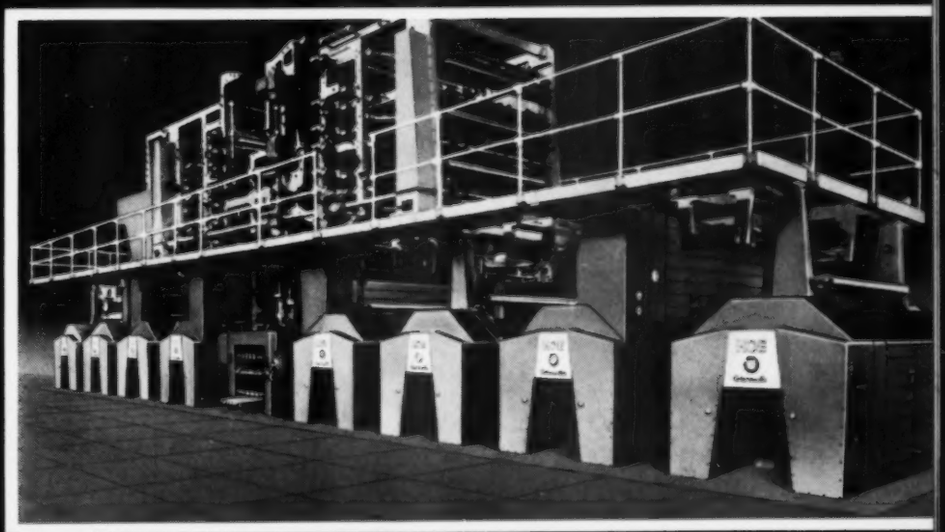
Hoe Rotogravure And Specialized Web Offset Presses . . . for printing supplements, comics, books, periodicals, and packaging materials.

Hoe Metal Decorating Presses . . . for color lithography on cans, bottle crowns, pails, drums, etc.



Hoe Satellite® Web Offset And Letterpress Units . . . for printing quality magazines.

diversified presses for a diversified industry . . . Hoe since 1805



Hoe COLORMATIC® newspaper presses have opened the door to more profitable ROP color.

® Trademark

In 1805, Hoe started serving those who produce the *most memorable* means of communication — the printed word.

During the past 156 years, the graphic arts industry has grown tremendously and Hoe has kept pace with its partner in both growth and diversification. As the leading manufacturer of *all types* of presses, Hoe offers the industry the unusually wide background of engineering experience that is needed to produce advanced designs — such as the revolutionary COLORMATIC press.

R. Hoe & Co., Inc., 910 E. 138th Street, New York 54, N. Y. Sales offices: New York, Boston, Chicago, San Francisco, Dallas, Miami.

Hoe and the graphic arts industry / partners since 1805

R. HOE & CO., INC.

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CONTROL

The proved Cutler-Hammer Counter-Stacker can make your mail room operation more automatic

it counts accurately... stacks efficiently

...already in operation or on order at many big dailies.

The new Cutler-Hammer automatic newspaper Counter-Stacker can go to work for you now to cut your mail room costs. Its accuracy and dependability have been proved beyond doubt. Forty Counter-Stackers have been bought in the last two years. Many were reorders following a satisfactory trial of one machine.

This mechanical marvel assures a smooth flow of newspapers from the press regardless of press speed, pages per issue (up to 128), or papers per bundle (up to 20" high). Actually up to 144 pages have been successfully handled on a production run. It is operating on both half fold and tabloid sizes.

And, now Cutler-Hammer Stackers can be programmed—including those already installed. You can get the advantages of automatic counting and stacking *now* and add the programming feature at any time in the future to enable you to automatically vary the count of each newspaper bundle to meet your route schedules.

We'd like to show you a ten-minute color sound movie of the Counter-Stacker in actual operation in a newspaper mailroom. Write, wire or phone us and we'll arrange a showing at your plant.

What's new at Cutler-Hammer?

The new Counter-Stacker is just a sample of the new things happening at Cutler-Hammer. We've geared up with new products, new personnel, new plants. Get the whole story from the Cutler-Hammer sales office nearest you.

At the right is an actual photograph of the Counter-Stacker in operation at the Chicago Sun-Times. Other newspapers with it working for them or on order are: Baltimore Sun, Chicago Daily News, Detroit Daily News, Fort Worth Star Telegram, Indianapolis Star News, Jackson (Miss.) Clarion Ledger, Jackson Daily News, Milwaukee Journal, Philadelphia Bulletin, Washington Post, Washington Star.

WHAT'S NEW? ASK...

CUTLER-HAMMER

Cutler-Hammer Inc., Milwaukee, Wisconsin • Division: Airborne Instruments Laboratory • Subsidiary: Cutler-Hammer International, C. A. Associates: Canadian Cutler-Hammer, Ltd.: Cutler-Hammer Mexicana, S. A.

H
CONTROL

For More Information Circle 47 on Reader Service Card

HELPFUL LITERATURE

FOLDERS Sales Aids Instruction Sheets Catalogs BULLETINS BOOKLETS Brochures

Circle Numbers on Reader Service Card in This Issue

Keep Yourself Informed. The folders and bulletins listed below all pertain to modern equipment, supplies, processes and/or methods. These have been prepared especially for plant managers, superintendents and foremen. Please circle the numbers on the Reader Service Card in this issue for the bulletins you wish to receive. Drop the self-addressed card in the mail. PRINTING PRODUCTION will forward your request.

Composing Room

PHOTOGRAPHIC TYPE SPECIMENS

A photographic type specimen book has been prepared by Graphic Services Inc., York, Pa. Included is a type fitting chart. Circle No. 353 on Reader Service Card.

PORTABLE SLUG RACK

An illustrated folder describing the Anstrem portable slug rack for ad rooms has been issued by Anstrem. The rack may be attached to a truck or set on a stone. It is portable, reportedly weighing approximately 90 lbs. when fully loaded. Circle No. 354 on Reader Service Card.

ADHESIVE WAX COATING MACHINE

A machine that applies a pressure-sensitive wax coating for pasteup is described in literature prepared by Potdevin Machine Co. Available in sizes ranging from 6 in. to 18 in. widths, the machine is recommended for use in assembling layouts and mechanicals. Circle No. 316 on Reader Service Card.

UNIVERSAL STRIP CASTER

A folder giving the specifications of the Universal strip caster has been published by Universal Mono Tabular Corp. Included in the folder is a sample 2-pt. hairline. Circle No. 348 on Reader Card.

ROUSE EQUIPMENT CATALOG

The Rouse band saw and power miterer are discussed in a catalog prepared by H. B. Rouse & Co. Information about lead and rule cutters, composing sticks, type gauges and other equipment is included. Circle No. 346 on Reader Card.

SELECTRO-MATIC QUADDER

An illustrated brochure featuring the Selectro-Matic Quadder for linecasting machines has been published by Star Parts, Inc. Circle No. 344 on Reader Service Card.

LINOTYPE COMET 300

The Comet 300 linecasting machine is the subject of literature issued by Mergenthaler Linotype Co. Reportedly, the machine delivers 12 lines per min. Circle No. 328 on Reader Service Card.

SCHAEFER PROOF COATER

Literature on the Schaefer adhesive wax proof coater has been prepared by Schaefer Machine Co., Inc. According to the sponsor, the machine may be used to apply a pressure sensitive wax coating to proofs. The proof coater is recommended for use in cold type composition, mechanicals, maps, and offset lithography. Circle No. 317 on Reader Service Card.

MATRIX CONTRAST COLOR SERVICE

A brochure explaining the operation of the Matrix Contrast Color-coding system has been made available by Matrix Contrast Corp. The system is said to eliminate wrong font mistakes and reduce composition errors and transpositions. Circle No. 347 on Reader Service Card.

LUDLOW ESTIMATING CONTEST

Ludlow Time Records is the title of a booklet containing the results of the Ludlow Estimating Contests held at the Graphic Arts Exposition. Jobs which were estimated and names of the winners of the contests are included in the booklet. Circle No. 356 on Reader Service Card.

MAGNESIUM NEWSPAPER BASE

A magnesium base recommended for newspapers is the subject of literature prepared by Monomelt Company, Inc. Height of the base is 0.001 in. Samples are available. Circle No. 357 on Reader Service Card.

Platemaking

MARATHON ROLL FILM CAMERA

Information on the Marathon 24 in. by 24 in. roll film camera has been made available by Chemco Photoproducts Co., Inc. The camera is equipped with an automatic roller applied contact halftone screen. Circle No. 349 on Reader Card.

POWDERLESS FLOW-TYPE ETCHER

An illustrated brochure describing the powderless flow-type etcher is available from Dirats Photo-Plate Co. The machine is designed for producing fine and coarse screen cuts and combination plates. Circle No. 342 on Reader Service Card.

STA-HI TWIN PLATE ROUTER

Literature on the Sta-Hi twin-plate router has been prepared by Sta-Hi Corp. The router is said to speed production. Circle No. 327 on Reader Service Card.

PHOTOENGRAVING ENGINEERING SERVICE

The Photo Products Div., Imperial Type Metal Co. is offering a photoengraving engineering service. Consultation, survey, layout and equipment recommendations are included in the service. Circle No. 334 on Reader Service Card.

GOODKIN TRANSFERMATE CAMERA

A camera designed for the first-step photographic needs of Ektalith, Gevacopy and other matrix transfer processes is described in literature published by M. P. Goodkin Co. Known as the Goodkin Vertical 18 TransferMate, the camera exposes film and paper to 14 in. by 18 in. Circle No. 326 on Reader Service Card.

GLASS PHOTOENGRAVING PLATES

A revised edition of a six page pamphlet, *Physical Characteristics of Kodak Glass Base Plates*, has been published by Eastman Kodak Co. According to reports, the thermal coefficient expansion of the glass is 0.0000045 in. per in. per degree F. Also, the plates are said to be dimensionally stable. Circle No. 324 on Reader Service Card.

KENRO VERTICAL CAMERAS

Literature descriptive of the Kenro Vertical 14, 18 and 24 cameras has been issued by Kenro Graphics, Inc. Cameras feature lens turrets, hold-open copyboards and interchangeable heads. Circle No. 343 on Reader Service Card.

USES FOR PERMACEL PRODUCTS

A directory listing suggested uses for Permacel products has been prepared by Permacel. Among the applications of Permacel pressure sensitive tapes are mounting electrotypes, blocking out lithography and bundling mats. Circle No. 319 on Reader Service Card.

CHEMICALS FOR LITHOGRAPHERS

Anchor Chemical Co., Inc., has prepared a folder which illustrates and describes Anchor chemicals which are particularly applicable to lithographers and associated craftsmen. Circle No. 315 on Reader Service Card.

ANSCO PRODUCT SAMPLER

A test sampler of Ansco Graphic Arts products and a booklet on the Graphic Arts and photography have been made available by Ansco Div., General Aniline & Film Corp. Circle No. 337 on Reader Service Card.

Pressroom

pH CONTROL IN LITHOGRAPHY

Information on the application of pH control to lithography is contained in a handbook by W. A. Taylor & Co. Control of the acidity of the fountain solution is the outstanding application of pH

(*Continued on Page* 88)

Bindery Automation is profitable with Speed-Klect collators

When you automate your bindery with a Speed-Klect Collator you join over 550 Speed-Klect users who have proven that a Speed-Klect in their bindery pays off in additional profits. These successful printers and trade binders know that slow, old-fashioned hand collating or semi-automatic methods in the bindery often cost them jobs in competitive bidding. Speed-Klect Collators automatically gather and glue one-time carbon forms and collate signatures, pamphlets, manuals, and single sheets.

* Patented and Pat. Pending

Speed-Klect accessories include; Slitter-Trimmer . . . Interleaving Delivery . . . Criss-Cross . . . Stitcher . . . Pamphlet Folder . . . and Creeper Delivery. Sizes 3 to 9 stations. A request on your letterhead will bring specifications and complete information.

Didde-Glaser, INC
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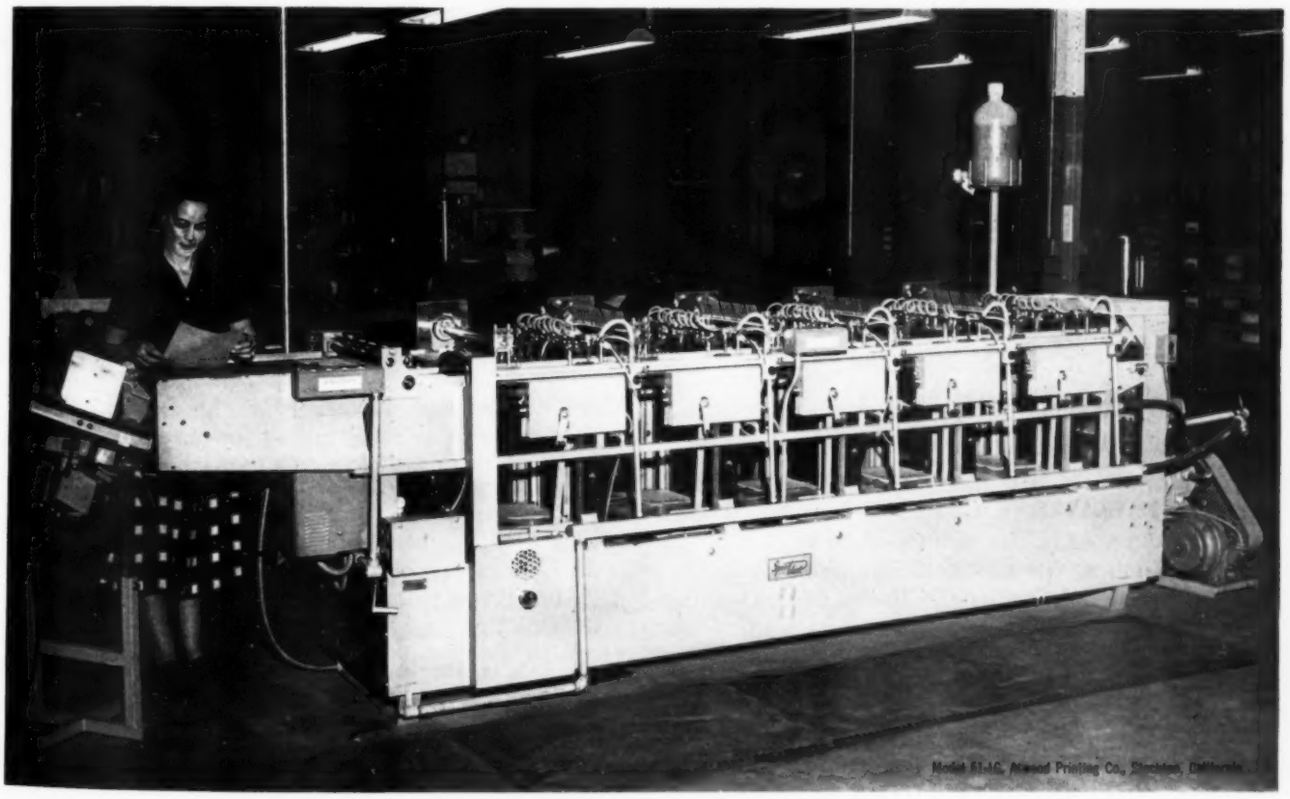
Designers, Manufacturers, and Distributors of Graphic Arts Equipment. General Office and Factory, Dept. P7, 50 Hi-Way and West 12th Ave., Emporia, Kansas. Sales and Service Offices in New York, Chicago, Los Angeles.



For More Information Circle 53 on Reader Service Card

Cut Or Trim The Best Way! Flat Cutting...Trimming Lifts...In-Line Trimming...MGD Has The Right Machine

Only MGD offers all four types of cutting and trimming equipment...*completely unbiased*, with no "ax to grind."

LAWSON PACEMAKER CUTTERS—for *flat cutting* accuracy and speed...six models from 40" to 69"... easy operation, maximum safety and minimum maintenance...optional Electronic Spacer and Flexible Contour Clamp. Low cost *Regent Cutters*, also.

DEXTER BRACKETT TRIMMER—for *cutting apart* multiple-up labels, booklets, pads, post cards, etc.... work up to 25" wide moves *straight through* the machine to a built-in conveyor for packing and shipping.

McCAIN 3-KNIFE TRIMMER—couples to stitcher, automatically *trims single books* accurately on all three sides...speeds up to 9000 per hour on sizes to 12 x 19" ...optional 4th and 5th knives for maximum output on two-up work. *39" Front Cut Trimmer, also.*

LAWSON 3-KNIFE RAPID TRIMMER—*trims lifts of books*, magazines or pamphlets on all three sides with exacting precision...lifts to 4¾" high...speeds to 25 lifts per minute...handles all types of bound work, one or two-up...sizes to 11¾ x 16⅞" (trimmed).

Be sure to check with MGD first about all of your cutting and trimming equipment needs.

MIEHLE-GOSS-DEXTER, INC.
Chicago 8, Illinois

For More Information Circle 234 on Reader Service Card

PRINTING PRODUCTION

Show Wagons Roll in October

The promoters of printing equipment shows in this country have arranged a triple feature program for the month of October which makes many ask: Why? Three such shows in one month are frustrating to those who will want to attend each and work havoc among the companies which will exhibit at all three. It also shows what little consideration for printing plant people was given in the original planning.

The show circuit (all tied to major conventions) follows this order: If you are in Chicago on Oct. 5-8, the National Assn. of Photo-Lithographers will offer "one of the biggest litho displays ever." Traveling overnight to Buffalo, N.Y., the American Photoengravers Assn.'s show opens next day (Oct. 9-12). There will then be a respite of a dozen days while the show tents are folded and the wagons move on to Washington, D.C. Here, Printing Industry of America opens its first large scale exhibit of Graphic Arts products for the period of Oct. 24-27.

While all the early planning is taking place, the official voice of the equipment makers, the National Printing Equipment Assn., says it "would like to see yearly shows discouraged." This certainly indicates there is little enthusiasm among the equipment people for holding shows too frequently.

Our European correspondent reported from Paris last month that Europe is probably coming to a gradual end of the frequent big printing machinery shows. The next international show will not be held until 1962. Are we, then, repeating the mistake of the European printing equipment manufacturers who found the continuance of these shows must be reflected in increased product prices?

If associations are determined to stage these shows as a drawing card for their particular convention then the responsible parties must make some effort to provide better scheduling. Why should the industry be subjected to a drought of such activity and then be wooed by the promoters to shows falling within a comparatively few days? We urge Printing Industry of America to again seek cooperation of other Graphic Arts associations in scheduling national events to avoid conflicting dates. A clearing house would help to create more enthusiasm for each activity.

Fig. 1—In this offset pressroom total lighting volume was 15 foot-candles. Pressmen had difficulty in matching color.

Fig. 2—View in same pressroom

HOW MUCH LIGHT

Is Needed for Graphic Arts Plants?

By ROBERT C. RODGERS, *Consulting Engineer, Technology for Industry, Inc., Cleveland*

CONTROLLING the quality of work done in a printing plant does not differ in principle from that of any other manufacturing operation. How much does it cost to reset a line of type? How many more galleys could be processed through a proofroom each day? How many dollars are lost because of excessive makeready time on the press? What amount of time and material must be expended to achieve good color matching and processing? These problems are major ones in any printing plant. Their cost is a major factor in determining the profit dollar.

The nature of the printing processes makes it almost impossible to eliminate many of these extra costs. However, these costs can be reduced. There is available a simple tool that may increase printing production 10 to 25%, reduce spoilage by as much as 20%, and provide a working environment more conducive to greater employee productivity. Modern, efficient lighting is this tool.

Good industrial lighting is a production tool that markedly affects employee accuracy, efficiency and morale. It has been proved time and again that a properly designed lighting system results in more and better production through faster, more accurate seeing. As a result of the tremendous advances in machines and methods, the complexity of detail that must be seen day or night has greatly increased.

The most effective way to meet these demanding requirements is to improve seeing conditions through well-designed lighting. As seeing conditions are improved, seeing becomes more reliable, takes less time, color is seen more clearly, clarity of fine detail is greater, human energy is conserved, and productive seeing is prolonged. Visual and lighting research in this country and abroad has indicated the desirability of 50 to 2000 foot-candles of illumination[1] for many critical seeing tasks to obtain maximum efficiency for both men and machines. Many

[1]—A foot-candle is the unit of intensity of illumination obtained when a source of 1 candle-power illuminates a screen 1 ft. away.

after new paint job and 120 foot-candle lighting installation; color evaluation is facilitated.

printing establishments are still lighted with only 10 to 20 foot-candles of illumination, Fig. 1.

In spite of the obvious advantages to a well-designed lighting system, the big question is "How much does it cost?" On a long-term basis, a good lighting system will make money for you instead of adding to your costs. Lighting systems that are tailored to a budget rather than to Illuminating Engineering Society recommended lighting practices often prove inadequate. Frequently the results are poor printing quality and wasted effort, the cost of which may exceed, by many times, the cost of a good lighting system.

In past years, many lighting users considered it practical to install a system that provided a foot-candle level just high enough to "get by." Today, just getting by does not meet printing demands for skillful workmanship and efficient performance. A careful analysis of costs involved in lighting is proof positive that good lighting is sound economy.

Lighting Costs Have Decreased

Since the early 1900s, there has been a spectacular decrease in the cost of light. Lamps are 10 times as efficient as they were then and cost about one-fifth as much. Electricity now costs about one-fourth as much as it did then. In 1906, for example, an employer's cost for providing one foot-candle of illumination per worker amounted to 7% of the worker's wages. Today, an employer can provide 200 foot-candles at a cost of 3.5% of the average worker's wages.

TABLE I—Recommended Minimum Lighting Levels for the Printing Industry

	Foot-candles
PRINTING PLANTS	
Color inspection and appraisal	300
Machine composition	100
Composing room	100
Printing presses	70
Imposing tables	150
Proofreading	150
TYPE FOUNDRIES	
Matrix making, dressing type	100
Font assembly, sorting	50
Hand casting	50
Machine casting	50
ELECTROTYPING	
Molding, finishing, leveling molds, routing	100
Blocking, trimming	50
Electroplating, washing, backing	50
PHOTOENGRAVING	
Etching, staging	50
Blocking	50
Routing, finishing, proofing	100
Tint laying	100
Masking	100

Note—When foot-candle levels exceed the figures shown in this table, better seeing conditions are provided, more efficient use of equipment results, and manufacturing costs are reduced. Where a high degree of precision is required, lighting levels substantially higher than those shown in this table are suggested.

Hourly Lighting Costs

The average hourly cost of lighting is about 1c per foot-candle per hr. for each 10,000 sq. ft. of factory space. This covers installation, operation, maintenance, and amortization of the lighting equipment over a 10 year period. Today's typical production costs per man hour break down roughly as follows:

$7-$10 for plant and equipment.
$2.50-$3.70 for labor.
2c for a poor lighting system.
4c-6c for good lighting system.

At an average rate of $3.10 per hr., a 10% increase in productivity would amount to 31c as against the added 3c increase in the cost of lighting. This 10-to-1 ratio is not unusual. The minimum increase in production needed to offset the lighting cost would be just over 1%.

Lighting users who have taken advantage of the reduced cost of light and increased their lighting levels proportionately have realized dividends in increased production, decreased spoilage, higher quality workmanship, and greater employee safety and comfort. Production increases from 5 to 25% are typical for companies where illumination levels have been doubled from 25 to 50, 50 to 100, and into the hundreds of foot-candles.

Case Studies Prove Economy

A group of actual case studies of industrial lighting and relighting to levels of 100 to 500 foot-candles revealed these results.

Lighting costs ranged from ½ to 6% of the cost of the productive labor that the lighting served. On a cost-per-man-hour basis, the range was from 1.4 to 12 c. The production increases necessary to offset the lighting costs ranged from as low as 0.3% to a high of 3%.

In every case, the investment was not only justified but profits were improved. In one particular case, worker efficiency was increased by 10%, spoilage was reduced by as much as 20%, and minor accidents were cut by 50%. Such benefits make it apparent that management cannot afford poor lighting.

To illustrate the sound economics of an improved lighting installation in relation to a printing plant, the

Fig. 3.—In Detroit's Thos. B. Henry composing room, illumination is 190 foot-candles—provides shadowless lighting, does not create glare.

Fig. 4—In the Uarco, Inc., composing room, Cleveland, supplementary lighting is not needed. Luminous ceiling distributes even light.

case history of a Mid-Western offset printing shop is a prime example.

The general lighting in the shop was measured at about 15 foot-candles, Fig. 1. Not enough light of the right kind made color matching of inks and samples difficult and slowed up makeready operations. Standard fluorescent lamps and old down-light fixtures meant uneven lighting levels and inadequate color rendition. Relighting to over 100 foot-candles made color work easier and more accurate, Fig. 2. In this case a 1% increase in productivity was all that was needed to offset the cost of the system and the actual increase was far in excess of that value.

Additional savings can be developed through more efficient operations in the repair and maintenance of machinery. Down time on presses and other equipment can be minimized if adequate lighting can be directed to hard-to-get-at areas or areas where precision work must be accomplished.

Lighting Level Research

A great deal of scientific research has gone into the development of minimum lighting standards for almost every industrial and commercial seeing task. Present methods of determination developed by the Illuminating Engineering Research Institute are based on its own studies along with those of Dr. H. Richard Blackwell, director of the Vision Research Laboratories, University of Michigan.

From these studies, levels prescribed for the printing industry are listed in Table I. If detailed work could be increased in size it could be more easily seen. Most eye tasks, however, cannot readily be made larger so only more light will make them more easily seen.

The design of a good lighting system is just as important as the quality of the printing equipment used. Generally, a uniformly spaced pattern of ceiling-mounted lighting fixtures is the answer. A uniform arrangement of lighting equipment overhead, however, does not necessarily mean that the lighting will be uniform.

In a room that is lighted by a regular pattern of overhead units, the foot-candle level on a horizontal work surface near the wall or in a corner will be lower than the level on a similar surface at the center of the room. If critical work is performed in these areas additional lighting fixtures should be mounted toward the sides of the room.

The foot-candle levels in perimeter areas depend, in part, on light reflected from adjacent walls. The amount of light reflected will vary depending on how light or dark the paint or wall finish is. The lightest finishes reflect 60 to 80% of the light that falls on them; finishes of medium value reflect 30 to 60%; dark finishes reflect less than 30%. It is obvious then that walls and ceilings of a printing plant should be light in color to obtain top efficiency from the lighting system, Figs. 3 and 4.

Although a uniform general lighting system is usually the best, there are cases in which supplementary lighting is recommended. The higher foot-candle levels needed over critical seeing areas are often best achieved with supplementary lighting that adds to a good general lighting system. This would be especially true for the tasks of proofing type, color register, general makeready, hand and machine typesetting.

Lighting Critical Areas

This necessary illumination can be accomplished with extra lighting fixtures, lights built into the machines, directional lighting and locating these difficult seeing tasks near good daylight sources. It must be remembered, however, that the daylight coming in the shop windows cannot be fully counted as a light source because night work eliminates this factor completely. In fact light is lost through the windows at night if there are no shades. Windows may also be a source of glare during the daytime. A good lighting system should provide a constant day and night illumination level.

Generally speaking, the preferable types of lamps that should be considered for plant lighting are incandescent (tungsten filament) lamps and fluorescent lamps. Each has certain advantages over the other and the choice of which type to use should be a studied one. A brief comparison listing the advantages and disadvantages of each can be found in Table II.

Equally as important as the lighting system itself is the lighting

maintenance that goes into it. Protecting the return from investment in a system requires a maintenance program that periodically returns foot-candle values to the highest possible level.

Lighting levels fall off principally because dirt accumulates on lamps and reflecting surfaces. There is also the normal loss of light output from lamp aging. A good program, to be effective, should include the periodic cleaning of lamps and fixtures, and the cleaning and repainting of floors, walls and ceilings in the plant.

For the economical use of maintenance labor, housekeeping could be coupled with a group replacement plan for lamp renewal. With this plan, all or blocks of lamps are replaced when they approach the end of a useful life.

In some plants, lamps in double-shift areas are replaced once a year and those in single shift locations every other year. With this program, burnouts total less than 5% between replacement periods. The labor saving more than offsets the lamp costs of replacement because it is just as easy to replace the lamp as wash it.

In cases where maintenance crews are small or where their duties are heavy, outside lighting maintenance firms can be employed to service your lighting system. Lamps can be supplied by you or by the maintenance company.

Also, if the initial cost of a new system is prohibitive at the moment, many lighting-maintenance contractors are offering leased lighting systems. The contractor will purchase and install a complete lighting system, maintain the lamps and lighting fixtures, including cleaning and lamp replacement, and also guarantee a minimum foot-candle level of illumination. If at any time the lighting level falls below the minimum, you do not pay until it is brought back up to the guaranteed minimum value. Payment for this type of service is made on a monthly basis and can be incorporated into your operating costs.

No matter what approach is taken to the subject, the facts show that a new or improved lighting system that maintains minimum suggested lighting levels can make money for you. It can reduce your costs by increasing printing production, by minimizing mistakes and spoilage, and by providing a plant environment that will increase worker productivity.

TABLE II—Comparison of Incandescent and Fluorescent Lamps

INCANDESCENT LAMPS	FLUORESCENT LAMPS
Incandescent lamps are available in almost any size, shape, color and voltage. This type of lamp has many desirable features along with several drawbacks. Here are some of the advantages:	Fluorescent lamps have nominal power ratings from 4 to 215 W. and produce light about five times as efficiently as comparable wattage, standard-voltage incandescent lamps. They are available in lengths from 6 in. to 8 ft. and in diameters from ⅝ to 2½ in. They are also produced in a number of circular forms. Major advantages of fluorescent lamps are:
1. Commonly available and inexpensive. 2. Simple to install and maintain. 3. Designed for wide voltage range. 4. Rugged and efficient at low voltages. 5. Operates well on either a.c. or d.c. 6. Concentrated light source. 7. Lamp life unaffected by intermittent duty.	1. High efficiency. (Generally results in lowest overall cost of light.) 2. Low brightness. 3. Low heat generation. 4. Resistance to shock and vibration. 5. Long life—6000 to 10,000 hrs.
These disadvantages are most prominent:	These are some of the disadvantages:
1. Low efficiency at standard voltages as compared to fluorescent. 2. High heat generation. (Limits to lower lighting levels, usually below 50 foot-candles.) 3. Fragile filaments in higher voltages. 4. Short life—usually 750 to 2000 hrs. 5. High brightness.	1. Complicated circuits and many components. 2. Do not operate on low voltage. 3. Do not operate too satisfactorily on d.c. 4. Light output affected by air temperature and circulation.

Fig. 5.—Continuous row lighting fixtures provide ample illumination in volume production bindery.

Donates Goudy Collection To RIT's Memorial Workshop

A collection of types known as The Lost Goudy Types has been donated to Rochester Institute of Technology by Mrs. Howard Coggeshall of Utica, N. Y. These types are to be housed in a Memorial Workshop at RIT. Included in the famous collection are Trajan, Friar, Bertham, Mediaeval, Kaatskill and Tory faces.

In addition to the types, Mrs. Coggeshall has also presented a large collection of material covering the active career of type designer, Frederic W. Goudy.

Copies of a special issue of the *Typographer*, an RIT student publication, devoted to the life of Goudy, are available. The issue is printed in Californian type, a face designed by Goudy.

● *Newspaper industry speakers exhort supervisors to better understand labor contracts from plant production standpoint.*

ANPA-RI SEEKS WAYS FOR

Best Administr a

DISCUSSION of best administration of union contracts and their effect upon production conditions in the newspaper industry was permitted last month by the American Newspaper Publishers Assn.'s Research Institute at its Mechanical Conference held at Hotel Americana, Miami, Fla. The precedent shattering departure in program format broke a 31 year silence in permitting the production and mechanical executives to take up labor topics at a mechanical meeting. The meeting attracted over 1000 newspaper and supply men for the three days of sessions.

In making announcement about the new program policy, ANPA-RI Mechanical Committee chairman, George F. Marshall, explained that discussion of union contracts already in existence would be permitted only from the standpoint of how best to administer them with respect to printing plant production. He warned that criticism of the terms or conditions in contracts would not be permitted. In other words, the conference was seeking ways to administer union contracts as executed by publishers—not to negotiate them.

Advises Discreet Comment

In behalf of the Mechanical Committee, Marshall also cautioned that if discretion was not used in speakers' comments this would be the last conference at which discussion of best administration of labor in plant production would be permitted.

Another important change in program policy consisted of discussions devoted to the theme: *Men, Methods and Machines.* Recognition of the necessity for training production supervisors along with methods of administration as well as reports on the performance of new equipment dominated the conference sessions.

At the Miami meeting there were no mechanical department sessions as customarily provided. The speaking program was arranged so that individual reports on plant technological and production accomplishments were made without respect to departmental succession.

Next year's conference will be held at the Palmer House, Chicago, June dates to be announced.

Opening speaker, James M. Cox, Jr., publisher of the Miami *News*, praised the activities of the ANPA-RI under the direction of Charles H. Tingley and applauded the educational activities now under way. These activities combat the human trait of resistance to change. Cox also urged the elimination of wasteful practices in the industry. In particular he referred to reproduction or bogus (resetting of ads received from another plant).

Foresees Break in Tradition

In his keynote address, James L. Knight, general manager, Miami *Herald*, spoke informatively and constructively from the newspaper management standpoint. Referring to the influx of newly improved equipment, he said: "These are devices the human mind has created to meet the problems of higher and higher wage costs and more and more restrictions in operating methods. Where men unwisely get the cost of their services out of line with production, there is the inevitable search for other means of doing the job. We are just beginning to witness a breaking of tradition in our business."

Knight related that the newspaper industry has spent liberally to build plant facilities over the past 30 years. He said amazing sums of money have been spent on plant

One of the most spectacular displays of the ANPA equipment show was staged by Radio Corp. of America. At left is RCA's newspaper conveyor which rose 20 ft. in the air and was in continuous operation. In center picture, George Magnus, director of research, Miami *Herald*, is given an explanation of the Klischograph engraving machine by Ronnie Koch of HCM Corporation. Receiving their early morning carnations in right picture, courtesy of New England Newspaper Supply Co., are Ernest C. Adair, stereotype foreman, St. Petersburg (Fla.) *Times*, and R. J. Richardson, production manager, Memphis (Tenn.) *Commercial Appeal & Press Scimitar*. The Florida lovelies are Emily Hilton and Lynn Whitehead, both of Miami.

By EDWARD H. OWEN, *Editor*,
and MacD. SINCLAIR, *Consulting Editor*

Chairmanship of the ANPA Mechanical Committee changed hands in Miami. New head is W. R. Coddington (left), Detroit *Free Press*, who receives the traditional gavel from outgoing chairman, George F. Marshall, Portland (Me.) *Press-Herald* and *Express*.

tr ation of Labor

equipment and added, the newspaper printing industry has not been stingy with its money.

Knight quoted figures from an accounting firm to the effect that the return on investment for 25 newspapers during 1958 ranged from 3.46% to 9.26%. Magazines, radio-television are in the 20% profit return bracket.

He commented: "Maybe we are just learning that our basic trouble is our investment in men. Our industry has done some strange things. To illustrate: We buy high speed production machinery and we immediately contract away our right to use the full capacity of the machine. We buy new presses with all kinds of gadgets to make the job easier—then we contract for increased manning. We buy automatic stereotype casting boxes and attempt to justify the use of a five man crew on it.

"Our contractual relationship with unions and our concept of money values in relation to production seem to point clearly to the allegation that our dealings with men have been awfully bad.

"It isn't possible to pay more and more money for less and less production. There must be a recognition of the need to have improved production to be able to pay more money.

"The point I want to make is simply that in our dealings with labor we ignore the warning signs that tell us we are on a one-way road going the wrong way."

Knight continued: "Bad as these money matters are, they are not as grave as our problem of dealing with the people who produce the newspaper. It is positively silly to look at the standards of competency of a printer.

"Most of you here today fall into what job evaluators call middle management. You are the people who cause the paper to be produced and you are the people who must answer for failures . . . Frequently you are unable to communicate with your publishers. You have a job title, but mighty little support from the office. It's tough to find that the office yields to demands in negotiations. It's mighty bad when an issue gets hot and the office gets cold feet.

Expects 'Miracle Workers'

"We all know that an increase in the number of employees calls for more supervision. Can you get approval from the office to take on a young engineer to help you with production problems? For some reason we have expected our mechanical superintendents to be miracle

A direct line to the Miami *Herald*'s composing room was maintained during the ANPA Conference for rapid transmission of conference registration copy. At left is Harry Friberg of the *Herald*, punching Teletypesetter tape at Fairchild Graphic Equipment booth. Right picture shows Hy Shannon, vice president of production, Chicago *Sun-Times and Daily News*, punching tape at display of Shaffstall Equipment, Inc. Interested onlookers (from left) are: Dr. A. Matuschke, Hamburg, Germany, and Everett Shaffstall and Eston Smith.

One of the equipment field's most distinguished executives, George E. Devyr (right), R. Hoe & Co., Inc., announced his retirement during the ANPA Conference. He completes over a half century of service with Hoe in sales and advertising capacities, and has attended every ANPA conference since 1930. He is shown here with Hoe vice president, W. W. Henderson.

workers and to enjoy 15-18 hr. days."

The Miami publisher also said: "It is vital that men in your position are men of character, integrity and intelligence. You must have the capacity to grow with the business. You must have foresight to look beyond today. You must have courage and determination to take a stand against unwarranted conditions.

"The jobs in the mechanical supervisory areas are going to come into their own. They will be paid better, but the job will be more demanding.

". . . we need more production; we need better ways of doing things; we need to understand and deal with our people on a more mutually satisfactory level. Wage rates will not move down, but the gap between production cost and production level can be brought into better alignment."

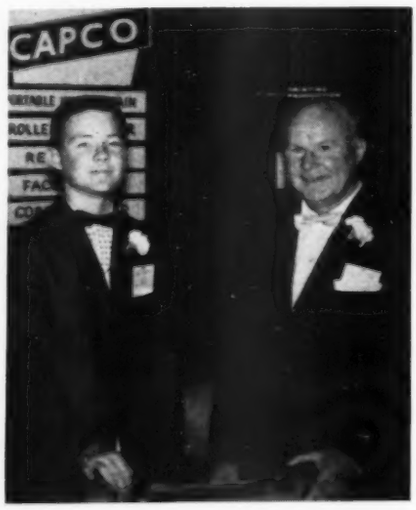
Seeks Better Understanding

Labor matters were also the concern of ANPA-RI Mechanical Committee Chairman Marshall, who is production manager of the Portland (Me.) *Press-Herald* and *Express*. He spoke on *Rights and Obligations Under Union Law and Contracts*.

The speaker said that in recent years the increasing number of labor problems has shown that the industry needs more than machines to survive and to prosper. He added: "Human reactions of man to machine, and man to man, play a critical role in . . . our work. We need more than mere machines to prosper. The human element is the most important in plant supervision."

Marshall said it was the major objective of the conference to bring about a better understanding of union contracts with respect to production. He remarked: "Production is declining while wages are rising. This situation has brought about the principal objective: To improve the skill and productive power of our personnel, and to improve relations between management and employees."

In speaking for the Mechanical Committee, Marshall said: "Our objective is exactly the same as that of every top union official in the printing trades unions of America. We believe that if every shop foreman, local president, chapel chairman and committeeman were as well informed on interpretation of contract clauses and union law as are the top international officers, we would have few grievances and greater harmony in all shops, and better production in those shops where production is poor."



Grandfather-grandson team of exhibitors at the ANPA equipment show represented Capital Tool & Mfg. Co. Fifteen year old Francis J. Storke, Jr., became Capco's third vice president while assisting Joseph P. Dorr, president of the firm.

Wants Foremen Paid Well

Directing his comments directly to foremen, Marshall stated: "One of the surest methods of keeping costs down is to convince foremen they are an important part of management. Perhaps the best way to do that is to pay them well. Good performance by a foreman is cheap at any price."

The ANPA-RI official also said that a foreman should know about the rights and obligations of everybody concerned as set forth in a contract. A union contract is a sacred document. The foreman should have an understanding and arrive at correct interpretation of every clause in the contract. He should insist upon a fair day's work from an employee.

In many instances, he continued, poor production is the fault of the foreman. Management is to blame for poor performance because it selects the foremen. Management should back the foreman to the limit.

He reminded the audience that the foreman is the boss of the room. He should never preface a remark with "it comes from higher up." The foreman makes the decision when something goes awry.

Lastly, the foreman should be fair, considerate and impartial in making decisions. He should be firm in insisting that all employees follow the terms and conditions in the union contract.

Fill Out Reader Service Card

Use the convenient yellow Reader Service Card found in this issue for requesting free literature found in PRINTING PRODUCTION's Graphic Arts Literature section.

Other ANPA Conf. Stories Start on Pages 58 and 64

Newspaper Composing Rooms Study How to Accelerate Production Rates

Newspaper composing room executives continue development of accelerated production rates as evidenced in reports given at the ANPA-RI Mechanical Conference held last month in Miami. Various speakers discussed Teletypesetter operations, application of a multiple conveyor system for swifter materials handling, and establishment of a dispatch and control department to conserve productive time.

The San Diego (Calif.) *Union* and *Tribune* is now in its 10th year of Teletypesetter operation, according to Gerry Burke, production manager, and output per linecasting machine has increased greatly. Since starting full operation in 1953 published pages have been increased 25% without increase in news battery of linecasting machines. This increase in page production, he said, was accomplished with an increase of only 5% in typesetting man hours.

Present news battery of linecasting machines consists of 10 tape-operated Comets, each equipped with quadder and Shaffstall mat detector. Nine machines are used regularly, one being conditioned for emergency use. Four manually operated machines are used for corrections and a small amount of add measure copy.

Automatic Tape Programming

There is a perforator beside each machine to enable transmission of copy from the perforator room. Ten standard and one multi-face perforators are used in the perforator room. The transmitters are connected to an allotter board which automatically programs the tape to the proper machines.

All news and classified copy comes to the copycutter's desk in the perforator room where it is time-stamped and logged. Operators operate run-of-hook as much as possible. Operator production requirement is 375 lines per hr. or equivalent. Two proofs are pulled of all galleys and operators are kept informed of output.

Average machine output is around 29,000 lines per wk. per machine. This is clock total and does not differentiate between single and double column output. Wire tape is colored to distinguish it from locally perforated tape.

Burke said that a successful tape operation requires a well planned maintenance program and reasonable production control. He added that this may require negotiation of a contract under which the company can operate.

Dramatic Tape Punching Changes

Within the next few years there will be dramatic changes in hot metal composing machine tape perforating equipment and production procedures. This prediction was made by Robert Wentworth, ANPA Research Institute's Production Engineering Div. director.

Tests conducted by Johns Hopkins University systems engineers indicate that perforator keyboard improvements can result in greatly increased hourly tape production. Information compiled in the study, will be available soon to Photon and Fairchild engineers.

George L. Green, production manager, Providence (R. I.) *Journal* and *Bulletin*, is head of the type production committee participating in the project.

(*Continued on Page 80*)

ANPA Equipment Show Views

(All names read left to right)

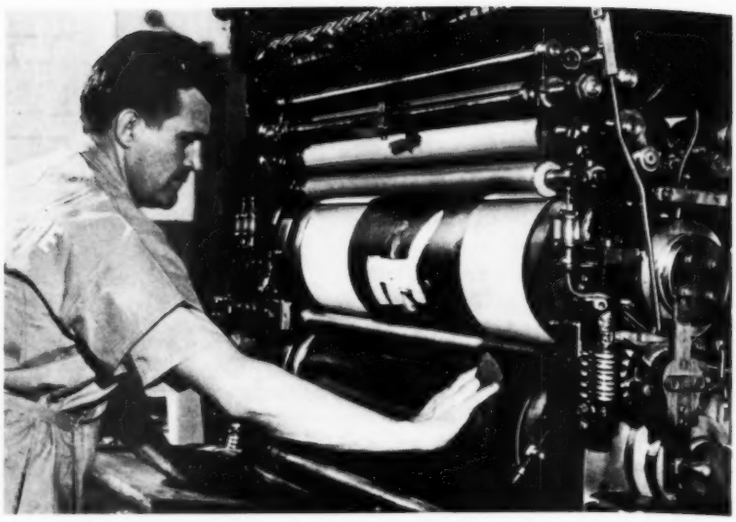
1—Visitors at *Printing Production's* booth were: Edgar Mills, president, Eastern Newspaper Supply Co., Inc., and Gardiner DeMallie, president, New England Newspaper Supply, Inc.

2—Discussing composing room problems were: Frank Higgason, composing room superintendent, Louisville *Courier-Journal*, and Bert Boucher, Mergenthaler Linotype Co.

3—Art C. McCain and Carl A. Turk, Ortman-McCain Co., enjoy a relaxed moment at their display.

4—Rocky Giorgio, Lanston Monotype Corp., explains Nebitype system to Harry M. Garr, production manager, City News Printing Co., Stamford, Conn.

5—Grouped around a Cutler-Hammer console panel are: George L. Green, production manager, Providence (R. I.) *Journal-Bulletin*; B. L. Mays, and C. P. Feldhausen, Cutler-Hammer, Inc.



Pressmen clean press blankets after each run of four color offset work at Litho-Krome Co., Columbus, Ga. Care insures the necessary perfect blanket condition.

PROPER CARE, MOUNTING AND PACKING HELP

Your Litho Press Blankets

By **R. R. LEWIS,** *Dir. Research and Development*
Vulcan Rubber Products Div., Reeves Bros., Inc.

WHAT is the best press blanket to use for boxboard operations, for metal decorating, for lengthy high speed runs, or with fast drying inks?

What blanket should be used to obtain the best performance with the new fine grain plates, the new dampening systems, or the coated papers?

What is the best way to rest a blanket or to correct smashes?

These are among the questions asked by lithographers throughout the nation—lithographers who are proud of their craft and want to keep pace with the new developments that have aided lithography in making significant progress in the past 20 years.

No single answer to any of these questions has as yet been established. One top pressman swears by one kind of blanket for a particular task; another prefers a different blanket. And they obtain equally good results with their particular choices.

Rule of Thumb Decisions

Only one thing is sure—the time has vanished when a pressman can choose a blanket by color alone.

However, through experiences of lithographers and through development tests, a number of rules of thumb have been established for choosing blankets for particular situations:

Choose a blanket which has a relatively soft Shore durometer if the paper used is predominantly offset stock, for rare runs of coated paper, or for dry offset.

Choose a versatile medium hard surface blanket when producing a wide variety of work on equal amounts of offset and coated stocks, for metal decorating operations, and for rotary web and dry offset presses.

Choose a tough, resilient blanket with a high degree of surface hardness for metal decorating, cardboard stock, rotary webfed presses, and multicolored presswork on coated stock.

Choose a blanket with a medium shore durometer for all-purpose service and for work with a wide variety of stock, if the blanket is not to be changed between jobs of different types run on different stocks, and if many short runs are scheduled in quick succession.

Choose a special solvent resistant blanket for use with heatset and fast drying inks and inks with high KB values. A range of surface hardness is available in these solvent-resistant blankets for use with different types of stock.

Choose a blanket with a special medium hard surface and which possesses unusual toughness and resilience for metal decoration and folding carton lithography work which require exceptional high standards of printing.

Though these rules are just guides, they have proved to be accurate criteria by pressmen who have tested them on the job.

However, there are some jobs which cannot be covered by these rules of thumb. These jobs which are special may require a little experimenting before the right blanket is found. For example, a job may require a hard blanket surface because of the nature of its halftones, but a softer blanket and much care are used in order to keep the blanket in top condition for a longer run.

Other factors which transcend the rules of thumb given and which affect blanket choice include the amount of packing that must be done, the age of the press, the speed of the press and the type of plate being used. For example, when using a presensitized plate, it is important to select a blanket with low abrasive qualities.

Proper Blanket Mounting

When mounting a blanket, hunch and feel should not be trusted. Rather, a torque wrench should be used and the tension recommenda-

tions of the press manufacturer should be followed. It is common for the blanket to stretch a little after it has been mounted on the press. To compensate for this stretching, the slack should be taken up after the press has been run for a short time. This operation should be repeated until the blanket has reached the limit of its natural stretch, but it must not be overdone. Overdoing the operation of taking up the slack will result in a thin spot forming in the center of the blanket.

Another important factor in mounting is positioning the blanket squarely on the cylinder. It is necessary that the blanket be fastened tightly in the bars before it is mounted on the cylinder. If the blanket pulls askew because it is not mounted properly, the register may be thrown off slightly, and it may not be discovered until too late.

Check Blanket Packing

Perhaps the most important step in blanket performance is in the packing operation. Once a run has begun, it is difficult to determine if a problem is resulting from plates going sharp, halftones filling in, press streaking, or what. More often than not, the trouble lies in a poor job of packing.

With the exception of very short runs, it is better to fill in low spots with tissue than it is to put more squeeze on the impression cylinder. It is not wise to avoid patching because of fear that the edges of the patch may show. To avoid having the patch leave an impression, the packing paper should be torn rather than cut. A feathered edge will not leave an impression so easily as will a sharp edge. Making each sheet of a patch smaller than the previous one is a second trick to use in packing.

The most accurate means of testing the packing job is to use one of the special thickness gauges—such as the LTF blanket packing gauge or a magnetic packing gauge.

Most pressmen consulted seemed to prefer breaking-in a blanket by rubbing it with pumice and water and then washing it with a blanket solvent. The procedure followed is: Rub the blanket with pumice and water using a side-to-side stroke; wash off the pumice with water; wash again with blanket solvent, and then dry the blanket. It is important not to soak the edges of the blanket, for soaking may cause them to swell.

When a blanket is on the press, the pressman should keep the blanket surface clean and be alert for areas with a glazed appearance. The surface of the blanket should drag slightly against the pressman's fingers when he rubs them over it. It should look dull, almost like very fine velvet.

The glazed areas on the blanket are formed from a build-up of ink film. This glaze may prevent an impression from being made, just as a low spot does. It can appear in any area where a film of ink is allowed to build up. The glaze may form in non-printing areas, also. However, in this case, the build-up is not ink film, but a lacquer-like dope composed of fountain solution, paper coating and ink. The cure is frequent washing down of the blanket.

After washing a blanket with a solvent it is important to remove all traces of the solvent from the blanket surface. Failure to do this can result in a softening of the rubber on the blanket surface. This precaution is especially necessary with the high boiling point solvents sometimes required by fire regulations. Resting the blanket after washing allows for the evaporation of solvent still clinging to the blanket.

If something stronger than a blanket solution is required to remove a glaze, a solution of blanket wash and pumice powder may be used. If the glaze still sticks, a caustic soda solution should be tried. In this event it is imperative that the last trace of the caustic be removed from the blanket surface.

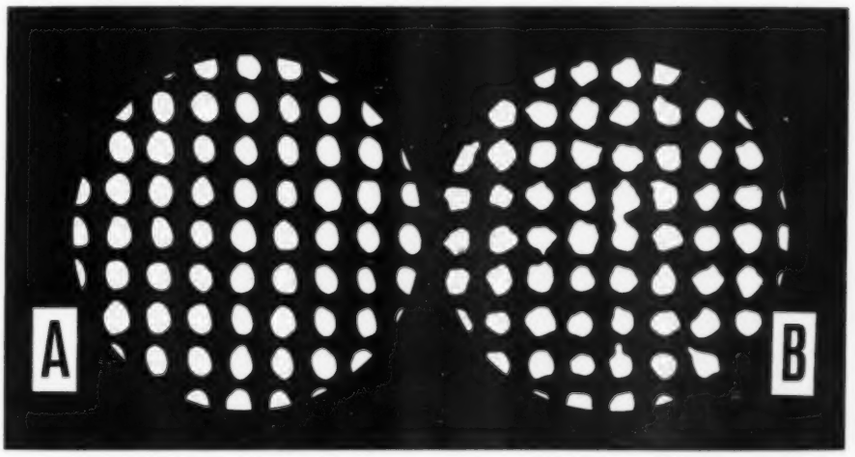
Should the surface of the blanket become tacky, a careful scrubbing is again the cure. When washing the surface of a blanket, it is important that care be taken of the fabric backing. Several problems which may result from careless soaking of a blanket are: Uneven swelling of the blanket, separation of the rubber ply from the fabric, and loss of surface coating adhesion.

Remedies for Low Spots

There are several remedies for surface low spots. Often a rest is sufficient for a low spot to bounce back. Some lithographers prefer to hang blankets in a cool, dark place; others advocate rolling them in newspaper. In any case, sunlight is bad for blankets—on or off the press.

For heavier smashes, overnight soaking will sometimes restore enough of the thickness to allow satisfactory patching of the remainder of the depression. Liquids recommended for soaking blankets are: Water, kerosene and turpentine. One printer recommends this formula for the soaking procedure: 6 oz. ether, 6 oz. citronella, and the balance kerosene in a half gallon jar.

However, there are some printers who contend that a blanket should never be soaked. They state that if patching won't correct the smash, the blanket should be discarded.



Enlargements of these 150 screen tint blocks show impressions made with two offset press blankets. Impression made with blanket "B" shows more fill-in. Blanket "A" produced a sharper image even though other conditions were as similar as possible. Blanket quality is affected by blanket care.

● *Electronic equipment for printing fast becoming a reality according to reports at Washington TAGA meeting.*

By JOHN D. HEMMLER
Assistant Editor

TAGA RESEARCH MEN

Take Look at Electronics

A RAPID obsolescence in equipment and diminishing reliance upon craft judgment have been forecast for the Graphic Arts by Philip E. Tobias, Philip E. Tobias Associates. This prediction was made at the 12th annual meeting of the Technical Assn. of the Graphic Arts, of which Tobias was the president.

The validity of the statement can be upheld upon learning of new developments in machines and scientific approaches to the problems in the Graphic Arts. More and more, the control of variables is being transferred from the disagreement of human judgments to the proving characteristics of electronics and mathematics.

Electronics in the Graphic Arts was the theme of the TAGA meeting which was held at the Sheraton Park Hotel, Washington, D. C., June 20-22. More than 300 Graphic Arts researchers, scientists, and printers heard of advances and improvements in this relatively new area.

Among the many papers presented was a report by James Stone, manager of electronics research and engineering, A. B. Dick Co., on a new approach to electrostatic printing, called the Videograph process. The process involves placing electrostatic charges onto a paper surface in such a way as to form an image. The image is then developed and fused as is done in xerography.

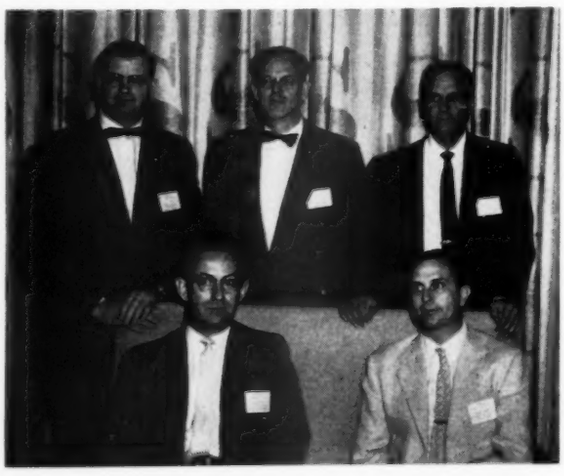
The charges are placed on the paper through use of a cathode ray tube which is penetrated with an array of wires. The wires are arranged, 250 per in., both horizontally and vertically and are activated by electrons striking the inner surface of the wires. Through deflection and modulation of the beam current, any desired image may be created. Wires transfer the image to paper which has been treated to retain the charged image until it has been developed and fused as in xerography, according to the Dick company spokesman.

Paper used in the process is coated with an electrical insulating material which is impregnated to make it conductive.

Stone indicated that at present the process is limited to printing on approximately 2 sq. ft. of paper per sec. The maximum paper width is 8½ in. because of the present stage of tube development.

The Videograph may have a number of applications, according to Stone. Microfilm and pictorial information can be converted into signals for the Videograph by means of a flying spot scanner. By providing means to scan the copy repetitively, duplicates in as many quantities as necessary may be produced.

Questions following the presentation included the inquiry as to the problems encountered with conductivity of the paper under varying humidities. Stone said that the present range of 15% r.h. to 90% r.h. was adequate. However, humidity above or below this range could result in difficulties.

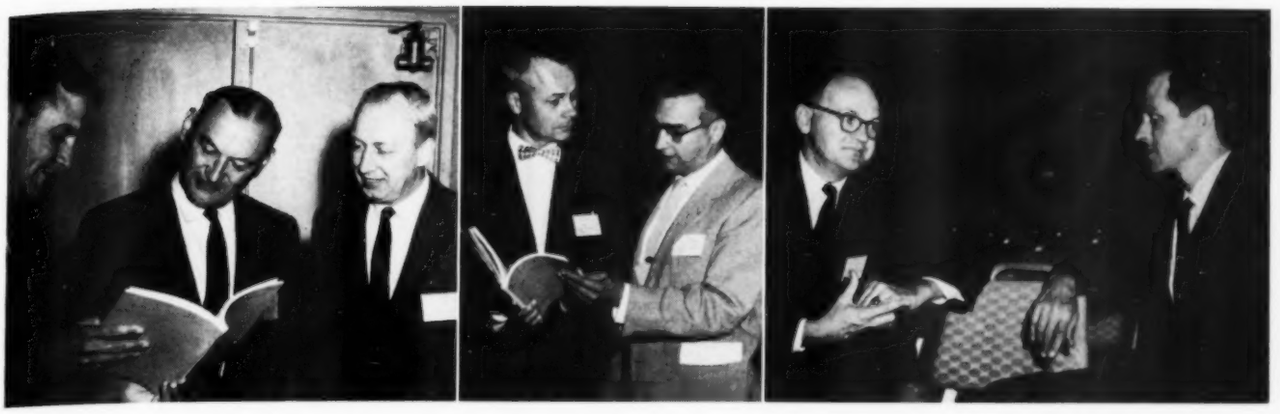


Newly elected TAGA officers are, left to right, seated: Philip E. Tobias, Philip E. Tobias Associates, retiring president, and William Walker, West Virginia Pulp & Paper, president. Standing: Warren L. Rhodes, head, Graphic Arts Research Dept., Rochester Institute of Technology, first vice president; William T. Reid, assistant technical director, Battelle Memorial Institute, second vice president, and Albert R. Materazzi, research coordinator, Lith-Kem-Ko, director. Not shown is Cyril A. Horton, Eastman Kodak Co., secretary-treasurer.

New Color Separator

A new color separator was described by Dwin R. Craig and John N. Street. The machine is designed to help one man produce one set of color separated negatives in one hour and is said to perform color correction masking entirely under the control of the operator.

The machine controls masking automatically by continuously sweeping the transparency with a small spot of light from a cathode ray tube. The spot of light has two components, Craig reported. One traverses along one axis of the tube at a fixed



At the recent TAGA meeting, left to right, were: John Colwell, assistant production manager, Colwell Press, Inc., Minneapolis; Frank Preucil, Lithographic Technical Foundation, Chicago; John H. Wilke, general foreman, camera department, Brown and Bigelow, St. Paul, Minn; R. F. Edgerton and Lester E. Goda, both of Eastman Kodak Co.; James Dugan, project engineer, Battelle Memorial Institute, and James Stone, manager, Electronics Research and Engineering, A. B. Dick Co.

rate of 50 cy. per sec. with equal forward and return rates. The other component travels along the other axis in a slow sweep which can be varied in length of time. The latter sweep determines the exposure.

Craig said with minimum exposure times, the sweep is designed to produce a 90% overlap between strokes made on the other axis, thus obliterating lines produced by the scanning motion.

By placing a beam sampler and phototube between transparency and lens, the phototube can view the same area as the lens. If the phototube output is amplified and inversely fed back to the cathode ray tube, the light spot will brighten when passing over dense areas of the transparency. Likewise, it will dim when passing over thin areas thus, a mask is formed on the face of the separator's cathode ray tube, according to the speaker.

The amplification of the feedback is adjustable and variable to allow various per cents of masking. The shape of the loop transfer characteristic can also be controlled which means that either highlight or shadow masking can be achieved. Color correction can be attained by inserting filters into the feedback loop.

When questioned about the number of lines per inch, Craig replied that during the fastest sweep there was a 90% overlap and the eye cannot see any scanning lines. He said there were, however, approximately 1000 lines per in.

The development of the Gammatron machine, an electronic means of development control, was described by H. B. Archer, Southwest School of Printing Div., Sam Houston State Teachers College.

The Gammatron unit, developed by J. F. Crosfield Ltd., London, England, reads the density difference produced by two control patches on the developing film. It automatically stops the development when the difference reaches a predetermined value. An infrared light source is projected through the control patches to a photocell which is used to receive the signals.

A disc having two apertures revolves so that the apertures allow the light to penetrate only through the control patches in rapid sequence to the photocell. The output of the photocell is fed to an amplifying unit which closes a relay when the sum densities of the two areas are equal. The relay

(*Continued on Page* 85)

Among those attending the Washington TAGA sessions, left to right, were: G. L. Erickson, vice president, Braden-Sutphin Ink Co.; Julius L. Silver, chemist, Union Carbide Plastics; Lloyd B. Ruetz, technical service representative, Gair Paper Products Div., Continental Can Co., Toronto, Can.; Edd Shipley, sales service engineer, Kingsport Press, Kingsport, Tenn.; James W. Marshall and Irving Pobboravsky, both of Rochester Institute of Technology, Rochester, N. Y.

1 The Buffalo *Evening News'* new stereotype, pressroom and mailroom building is just two blocks from Buffalo's main business section. All other operations are carried out at the nearby original building. New building is close to New York State Thruway, on N. Y. Central siding and near St. Lawrence Seaway.

Buffalo News Goes After Quality in $8 Million Plant

By WILLIAM E. KEIGHTLEY,
Mechanical Superintendent, Buffalo Evening News

EIGHT million dollars and two years of operation has given the Buffalo, N. Y., area one of the most modern newspaper mechanical plants in the country. Using an old cliche, it could be described in newspaper ranks as the "house of quality," for it includes many of the engineering marvels now available to the newspaper printing industry.

The building, housing mechanical operations only of the Buffalo *Evening News,* is located a couple of blocks from the heart of Buffalo's business section. It is adjacent to entrance and exit ramps of the New York State Thruway, on a siding of the New York Central Railroad.

Plans originated by the late Edward H. Butler, Jr., were brought to completion by Mrs. E. H. Butler, president, and James H. Righter, publisher. The *News'* staff planned the processes and machinery layout, while the building and services were designed by William Ginsberg Associates.

The new building houses the stereotype foundry, pressroom, mailroom, paper storage, delivery facilities and truck garage. All of the other

2 Newsprint rolls are removed from railroad car or trailer truck by a Bartel device battery truck and are deposited on dollies. Four dollies, each carrying two rolls, are towed to storage area where they get six weeks seasoning before use.

3 Five rolls are laid down by the clamp truck alongside each press reel to minimize pushing rolls by hand on dollies. Rolls are stripped here. Wrappers, white waste and cores are placed on pallets and then returned by fork truck each morning to the waste handling area.

4 Master stereotype metal remelting pot. Pot capacity is 22 T. and is gas fired. Remelting capacity is 11 plates per min. Molten metal is delivered by gravity via heated pipes at Buffalo *Evening News* into two Wood Automatic Autoplate 9 T. casting pots. Metal temperature is held at 3 deg. F.

5 Foreman John Barnes is aligning a stereotype color mat by means of illuminated cross-hair register mark. This mat will be held by vacuum while head, tail and one side are trimmed by knives, one of which can be seen toward back of machine. Mats requiring accurate register are molded in direct pressure press.

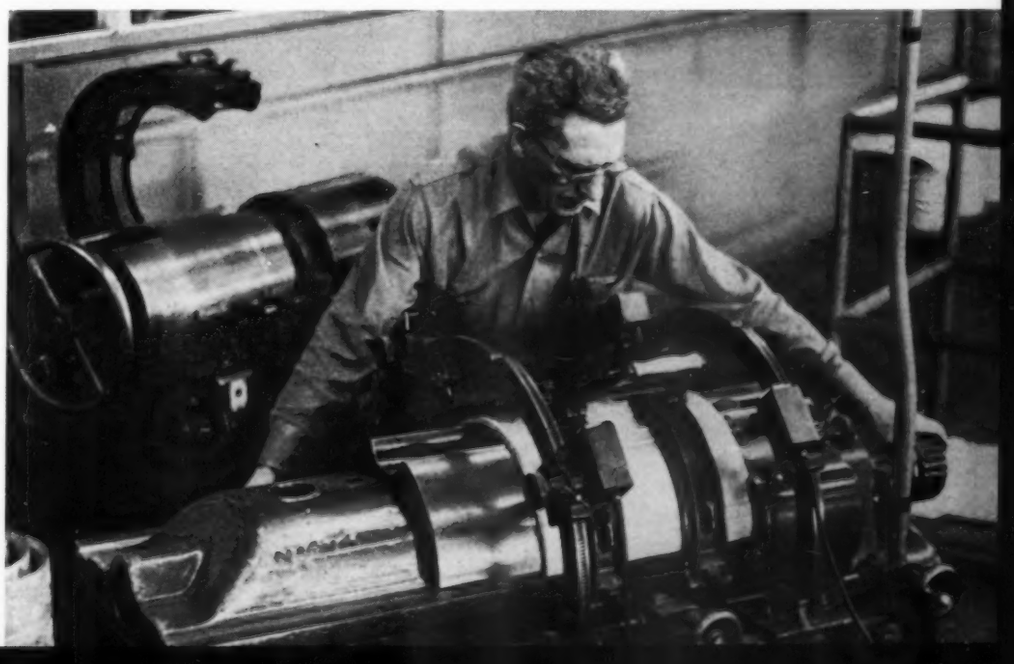
departments—editorial, business, composing, engraving and stereotype mat molding are still performed in the old building nearby. Stereotype mats are molded and transported before forming by shuttle cars to the stereotype foundry in the new building.

Outside walls of the new building are brick veneer on concrete block. Floors are concrete on the paper storage level, hardwood block in stereotype and mailroom, and abrasive steel in the pressroom. All spaces are ventilated, and the pressroom, reelroom and paper storage are humidified to 50% R.H. at 70 deg. F. There is storage capacity for 4000 T. of newsprint.

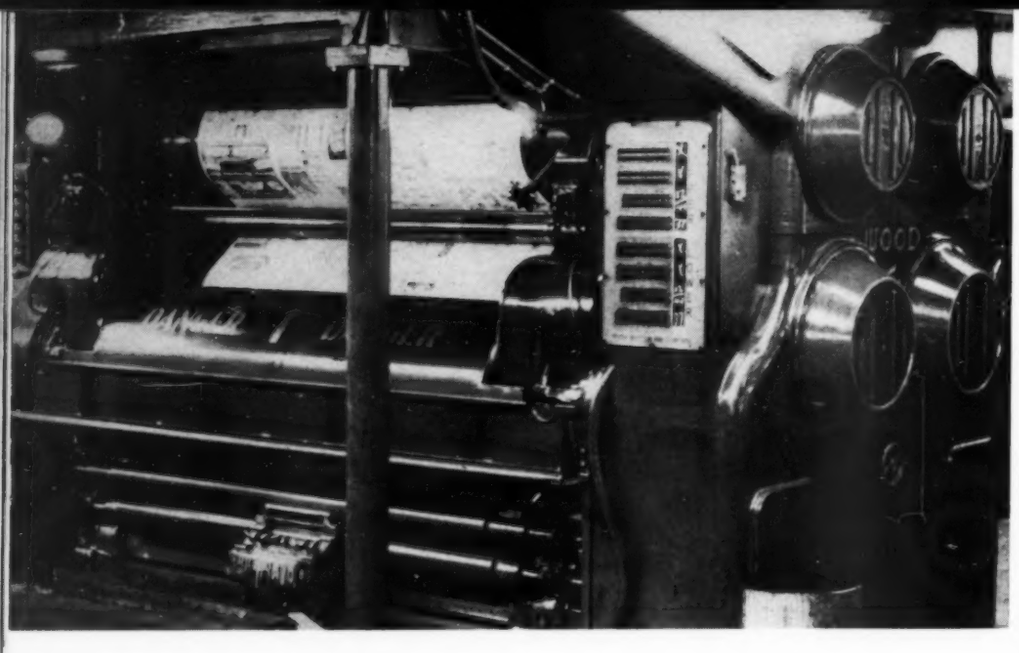
The flow of material in the *News* plant is such that a minimum of handling is required. Newsprint rolls are taken from railroad car or trailer truck and are moved direct to storage by battery powered truck attached to a dolly train. Newsprint stays on the same floor from carrier through storage and alongside the press reels. The stereotype plate casting department, or foundry, is located at the end of the pressroom. The garage is at the end of the truck space.

The pressroom is 56 ft. wide and 250 ft. long with space for eight identical presses arranged in two lines with color units between lines. There are five new Wood presses operating, each consisting of six regular units and one four-color unit. Space has been provided for one additional regular unit at each press. Present capacity is 96 pages with eight pages in single or process color.

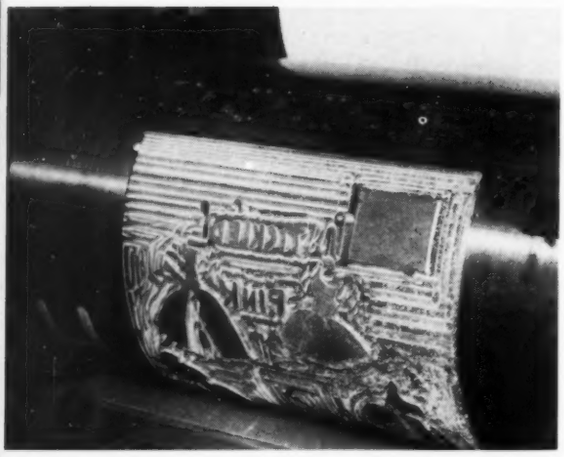
Total floor space in the new building is 180,000 sq. ft., which includes space for 100% expansion of the press and mailing departments. Space has been provided on the ground for future erection of an adjoining



6 Assistant foreman Howard Schau aligns one of the color plates in the set by means of the illuminated cross-hair register mark. Press tension lockup grooves or pockets are milled into the underside of the plate on this Wood preregistering Automiller. Machine behind Schau is for use in double truck plate matching.



7 View of Wood four color press unit at Buffalo *Evening News*. A single page width portable is shown. Outside pages are fed from regular color fountain underneath, all on the red couple. Web leads between couples are short—30 in. Flexibility of equipment permits color plates to be prepared days or weeks ahead.



8 Plate is locked on press cylinder by hooks which clamp grooves or pockets milled in underside of plate. Plates are each adjustable for color register, both sidewise and circumferentially as required.

building to house all of the departments.

MATERIALS HANDLING — In each department in the new building, the processes were planned first to meet production and quality requirements. Then materials handling methods were planned to accomplish these processes with as little movement of materials as possible. Mechanization was used, but only where it was clearly the best means to an end. We proceeded on this basis.

In many cases, manual operation combined with partial mechanization was chosen over a more complete form of automation. For example, the newsprint rolls are carried from the railroad siding to storage on a train of small trucks pulled by a battery powered tractor. This system was chosen as offering more flexibility than a conveyor system and equal economy of operation.

The major materials moved are black stereo plates, color stereo plates, newsprint, waste paper, ink, printed newspapers, stacks of papers, bundles of papers, and pre-run supplements.

Stereo plates are conveyed from the shavers directly to the presses in the conventional manner. The conveyor, which moves in one direction only, leads back into the stereotype department and returns the used plates into the large melting pot.

Color plates are stored in lightweight rack-trucks after casting and are wheeled from miller to router to storage, and eventually to the plate conveyor.

Newsprint is removed from railroad car or trailer truck by a Bartel device battery truck and placed vertically on dollies. Four dollies, each carrying two rolls, form a train and are towed to storage.

After about six weeks storage in controlled humidity, the rolls are taken to the side of the reels by clamp truck exactly where they are to be used, and are laid down. Stripping is done there. Cores and white waste are stacked in bins during the press run and removed to the waste handling area by fork truck. Cores are stacked in loads of up to 180, bundled with steel strapping, and moved out by fork truck.

Black ink is received in 80,000

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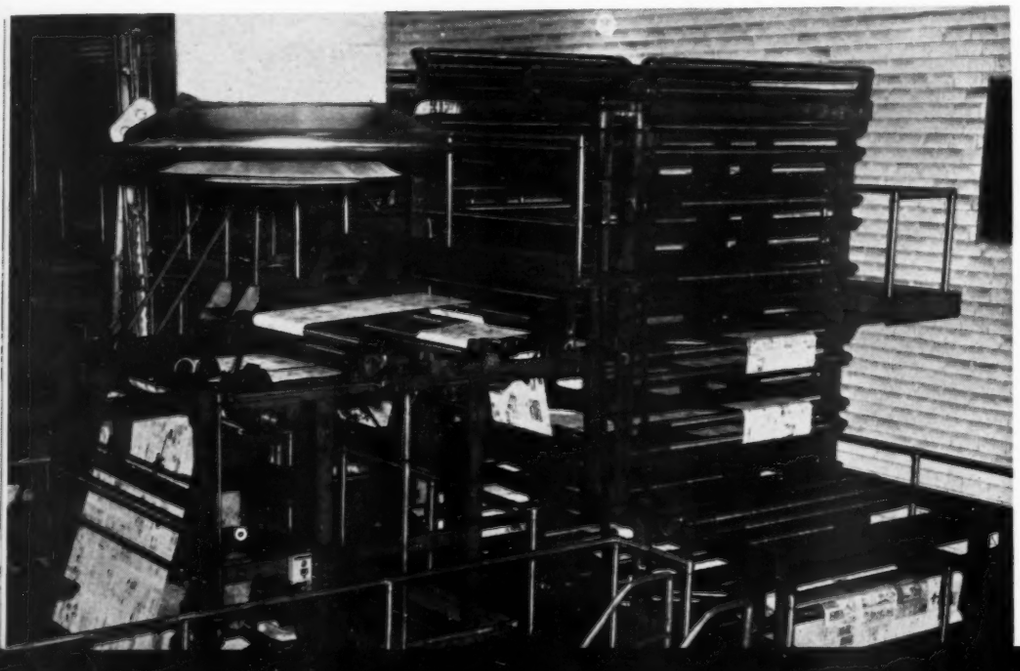


9 The color web is being slit to provide two desired color page locations and two companion pages in color. In this case, both color webs are being turned in the bar nest in the direction which will make the color pages face down on the former. Press operation for front and back of folder has been about the same.

Take Your Pick of Control

SYSTEMS

. . . many different systems are available to help printers better control production.

By FRANK MYRICK, *Eastern Editor*

LAST OF A SERIES

IN the days when labor and equipment were cheap, lost time due to confusion in plant scheduling did not have the consequences it has today.

A lost production hour on even the simplest production machine today may well cost more than $10 per hour to operate. Lose track of an order in the plant and premium wage hours are spent to get back on schedule. Overload a machine and the results will spread throughout the entire plant; overload other machines, and delays are caused in other departments. This frequently means lifting some jobs and putting them on another machine which may not be the most profitable way to run it.

This type of situation dictates the necessity for some sort of production control system. Some plants evolve their own from a mishmash of strings, rolls of tape, blackboards, notebooks, etc., but if time is valuable, it would be wiser to investigate available control systems which serve wide purposes.

These systems are devised for all sorts of industries by specialists, which include some specially designed for printing operations. Perhaps these systems do not provide the means for showing all the data desired, but if time is taken it will be found that details can be worked out.

As pointed out in one article (see PRINTING PRODUCTION, Sept. 1959, page 58), the Produc-Trol system, produced by the Wassell Organization, Inc., Westport, Conn., enables a plant to pinpoint the position of each order, every day. In addition, boards like these provide a number of advantages. The Produc-Trol system helps spur departmental teamwork by recording progress in each department and simplifies rescheduling. The elimination of embarrassing delays in determining job progress which promotes customer good will is another important advantage.

Many reasons are given for the negative attitude of some who are opposed to these systems. Some of the common remarks are: Who has time to fuss with pegs and string? There is too much work in the plant to keep up with a board. Everyone knows what is going on anyway.

These, however, are excuses, not answers. Perhaps the answer can be found in the fact that the installation of such a system demands change, to which many are opposed. Once involved in the troubles precipitated by a missed schedule or a lost job, however, how acceptable are these excuses?

The Produc-Trol system is in use in a number of printing and allied trades plants. There are, of course, plants which have purchased them and have neglected to use them, but their number is reduced annually.

The average board occupies a space approximately 3 ft. square. Larger boards are available if needed, but the one mentioned above will handle up to 100 different production jobs.

Attached to the left side of the board is a visible card index on which are listed jobs in the plant. These might be commercial printing orders, names of publications, books or other work. The cards contain essential information about the job, schedule, quantity, shipping instructions, etc. It is possible to use the plant's job ticket system in conjunction with the card, thus needing only one typing. For quick reference, only the customer's name and order number are visible.

On the other side of the board is a date panel including the time span most convenient to record, which can be days, weeks, or months. The columnar spaces just preceding this strip may be used for departmental headings, such as composition, proof out, proof due, plate, press, bindery, and shipping. Above these records is the legend panel, which describes the functions of the various signals, such as diagonally split buttons, circles, colored pegs, etc., which can be altered to individual requirements.

For example, one button may specify the number of reams of stock, where located, etc. A location button identifies the whereabouts of the order in production. These are supported by pegs attached to elastic cords, which are plugged into the perforated board on the column under the completion date. Two vertical lines afford a visible check on progress toward this date. The today line is moved daily to correspond with the current date, and the lead line is set at some preselected time ahead of the current date.

Target date pegs are inserted in the upper row of holes in the pegboard section. The elastic tape peg, on a spring, is moved along as the job progresses until it is able to be inserted on schedule directly beneath the target date.

The board may also be used to measure inventory, salesmen's quotas, and many other requirements of management control.

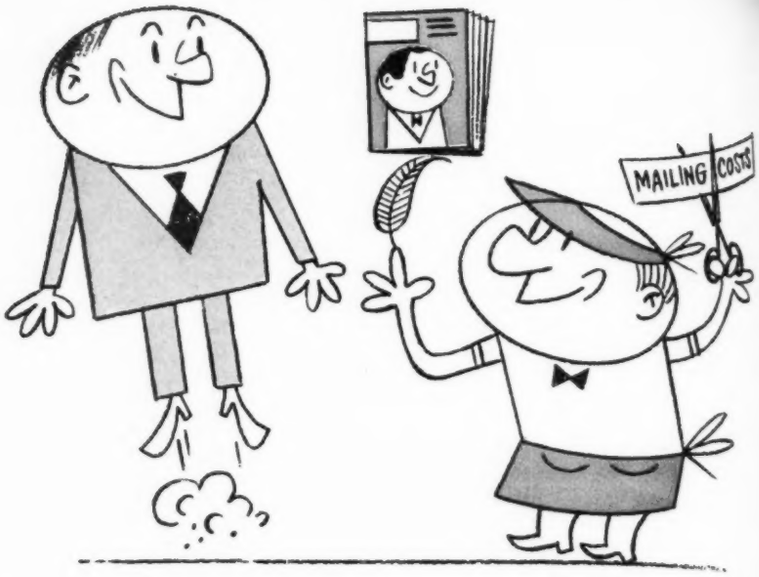
Another Type of Control Board

A new product, Vu-Board, a visual load control device, has proved a useful adjunct in reducing overloading of individual machines in a department. This is also produced by the Wassell Organization.

The Vu-Board is essentially a series of long rows of channels into which signals, precoded for quan-

Lighten your customers' hearts!

USE GREAT NORTHERN'S



LIGHT-WEIGHT PRINTING PAPERS

Magazines, catalogs, company publications, direct mail — make them all "go light" to fight rising distribution costs

It goes without saying! If the number of pages is going to stay the same, weight per page must go down. That is, of course, if you have a need to sidestep postal rate increases and the general rise in distribution costs. And what printer or publisher hasn't, today?

Great Northern's "light-weights" are a new and loyal ally in helping you keep your weight down. And you don't have to "go without" to do it.

Nobody knows more about making groundwood papers than Great Northern. Even our light-weight papers give that pleasant-bodied "feel" of quality that normally goes with heavier stock. Opacity is excellent.

And they're yours — white, bright and smooth — for any job . . . from direct mail to directories, magazines to mail-order catalogs. The price compared with other grades of printing paper may surprise you.

So, go light! Get the sleek new look with Great Northern's light-weight printing papers. Like all of our specialty papers they are yours to make money out of, as leading printers and publishers already know.

Light-hearted FACTS YOU'LL LIKE

about Great Northern's Light-Weight Papers

Custom-finish. Great Northern's "light-weights" are widely used for gravure, web-offset, letterpress.

High strength to weight. These light-weight champions have the stamina — the web-strength, tear-resistance — to go the full round on any press.

Opacity. Not only do colors lay on smoothly; GNP "light weights" also have excellent resistance to "show through."

Light-weight means it. Catalog papers (25 x 38 sheet) weigh as little as 25 lbs., less than an ounce for six square feet of quality paper — good news to offset rising distribution costs.

The company that thinks ahead . . . does the best job today

GREAT NORTHERN PAPER COMPANY

Mills in Maine

Sales Offices: 342 Madison Avenue, **New York,** MUrray Hill 2-5984
230 North Michigan Avenue, **Chicago,** FInancial 6-1993
20 Providence Street, **Boston,** HAncock 6-7960
2420 Carew Tower, **Cincinnati,** GArfield 1-3080

One branch of this "family tree" has your name on it!

When we say "Great Northern Means Groundwood," we *mean* it. Among all the branches on this "family tree," there's one that has your name on it. All Great Northern Groundwood Printing Papers are custom-made to order. Finish, weight, color — these factors, and more, can be combined into any "formula," to give you the right paper for your particular printing job and process. If it's printed in quantity, and *printed for quality,* Great Northern has the paper you want, at a thrifty price. Call in your experienced Great Northern representative and detail your next order. He's as near as your phone!

tities, job numbers and customers' names are inserted. The signals are made of 180 lb. index stock, furnished in sheet form, in various colors and perforated for easy separation after typing or other filling in. They can easily be snapped into place in the channel beads. They come in two sizes, 5/16 in. and ¾ in. wide and either 2 in. or 4 in. in length for close or long range viewing. The left hand line inserts carry the names of equipment or departments, while the time units are carried across the top. Double channels per machine are recommended for better visibility. A today line is also utilized on this unit.

The Boardmaster System

Still another system is called the Boardmaster Graphic Visual Control System, and is marketed by Graphic Systems, 55 W. 42nd St., New York 36. This system features a metal board into which cards carrying the desired information are inserted much like photos are mounted in an album. The headings—many of which are supplied in printed form with stock headings such as months, etc. can be mounted along the top row. These may be the days of the week or month, and beneath them can be mounted the suitable headings for composition, etc.

The cards are furnished in several colors and supplied in three sizes: 2¾ in. by ¾ in.; 1⅜ in. by 1⅝ in., and 2¾ in. by 1⅝ in. These cards are provided in strips so that they may be typed, printed, or coded, and then separated along the perforations for inserting in the grooves on the board.

Another visual production board was developed by Conley, Baltzer & Steward, 494 Jefferson, San Francisco, which is called Rol-a-Chart. The board is made of welded steel and its size is 25 in. by 23½ in.

Data can be marked on a clear plastic sleeve which rolls along the board. The board is marked off in either ¼ in. or ½ in. squares which allow room for 168 time units to be entered. An index space is provided which allows room for listing 80 items vertically (see PRINTING PRODUCTION, Sept. 1959, page 78).

Control systems range from highly detailed to comparatively simple arrangements. Some are card systems which allow information to be typed and then coded (see page 68, this issue). There are even do-it-yourself kits available which the printer can use to make a system fit his own individual needs (see page 74, this issue).

A variety of similar devices have appeared at one time or another and are doubtless still in use. The best test of any system will be its actual value to the company in fulfilling control requirements better than some other method.

(*Concluded*)

Craftsmen to Review the Past, Orbit into Future at Atlanta

The future, present and past of printing technology will be scanned at the 41st International Craftsmen's Assn. Convention, Biltmore Hotel, Atlanta, Aug. 7-10. Unusual titles given to the 25 technical clinics range from *Please Don't Trim the Daisies* to *Type Goes Into Orbit*.

COOPER

Sen. Herman Talmadge of Georgia will deliver the welcome to Craftsmen on Sunday evening, Aug. 7, when the convention is opened by International president, Thomas Cooper, who is also an Atlantan. The first session of the technical program will convene Aug. 8 at 10 a.m. Topic for this session will be new developments in use today—the photomodification camera, photopolymer printing plates, the Brightype process, and wrap-around plates.

The remainder of the technical program will consist of six sessions, each having four simultaneously held clinics from which Craftsmen may choose the one they wish to attend. The *Atlanta in August* program has been planned by a large local Craftsmen committee under the direction of Warren Taylor, general chairman, and George Armstrong, Atlanta Club president.

Following are the times and the topics of the various clinics:

At 2 p.m., Monday, Aug. 8, sessions will be held on the advantages and disadvantages of web offset; on-the-job training of personnel; the rise of photoprocess handlettering, and improvements in duplicate printing plates will be discussed.

At 3:30 p.m., that same day—Transition to web rotary in a Nashville plant; offset platemaking with new materials; designing for packaging printing; and problems and progress with trimmers, cutters and collators (*Please Don't Trim the Daisies*).

Tuesday, Aug. 9, at 9:30 a.m.—Making money in the composing room; camera techniques in preprint offset; the case of flexography vs. offset vs. letterpress vs. gravure in packaging printing, and a discussion of publication typography as utilized by *McCall's* magazine.

Also, on Tuesday, at 11 a.m.—Roundtable discussion of letterpress printing; offset process work; finding simpler and better ways of doing most everything, and problems

ARMSTRONG

TAYLOR

and progress in folding operations.

The final day of the convention, Aug. 10, will feature two sessions: At 10 a.m.—humidity control; trends in modern typography (*Type Goes Into Orbit*); offset and letterpress printing in the business forms field, and quality control.

At 11:15 a.m., the same day—color and register control; problems and progress in proofing processes; printing on films and foil, and problems and progress in laminating and die cutting.

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can you pick the press to fit your n

COX-O-TYPE
Rugged, economical, flatbed; now with color units; for weeklies, small dailies.

SUBURBAN
Web fed offset press for papers in the 5000 to 25,000 daily circulation range.

UNIVERSAL and TUBULAR
Most economical presses for medium-size city papers; speeds up to 40,000 p.p.h.

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More popular than ever, now with many improvements; prints up to 60,000 p.p.h.

. . . and that's just the beginning of your tailor-made installation

YOUR NEEDS? A team of Goss engineers will work closely with you and study your production—from raw stock to finished newspaper. With their broad experience, they can give you valuable advice on plant planning, production problems and materials handling, as well as recommending the right press.

PICKING THE PRESS. You'll choose from the *only complete* line of newspaper presses available—including the newly improved Headliner Mark I, the sensational new Headliner Mark II, the all-new web offset Suburban, plus all the other standout presses.

CUSTOM-FITTING IT. Your press will be constructed to *your* specifications—incorporating the exact features that you need, even making basic modifications if necessary.

THE RESULT: A press specially designed for *your* operation . . . a Goss-built press that will give you top operating ease and efficiency with maximum net production.

***3** out of **4** American daily newspapers are printed on Goss presses*

THE GOSS COMPANY
CHICAGO 50, ILLINOIS

Specialists in newspaper, magazine and roto presses

A DIVISION OF MIEHLE-GOSS-DEXTER, INC.
The leader in graphic arts . . . engineering, service and manufacturing . . . industry-wide and world-wide

PRINTING PRODUCTION's

OVERSEAS' REPORT

By WILLIAM CRANE

Japanese Newspaper Prints Long Range

President Eisenhower's cancelled trip to Japan was instrumental in calling attention to Japan's development as an industrial power. Some commercial printers on the West Coast, and book publishers in Eastern U. S. cities have already lost business to Japanese printing firms. Those American manufacturers of printing equipment who still look upon Japanese equipment with views formed during the dime store shoddy toy pre-war years, may be due for some unpleasant surprises in the next decade.

The few Japanese presses which have been installed in Canada and in the United States are unquestionably second rate. In Japan itself sheetfed and webfed equipment, both letterpress and offset, is decidedly inferior, and in most cases very poor copies of old German machines. Gear streaks are a perennial problem, probably caused by the vast quantities of inferior scrap iron which Japanese equipment makers must use in press manufacture. The phototypesetters which have been in use for some 30 years (one has recently been installed in California) cannot be compared with anything in the U. S.

Graphic Arts May Boom

But before the whole industry is dismissed completely, let us bear one thing in mind: Within the past 10 years the Japanese electronics industry has grown from nothing to one of the top-notch producers (both in quantity and quality) in the world. This leads us to speculate that perhaps the same thing may be done in Graphic Arts machinery.

Having set the proper stage, let us briefly report on a most unusual development in Japanese newspaper production that should be of interest to American newspapers.

The *Asahi Shimbun* is one of Japan's biggest dailies with a circulation range from four to seven million. It is now the first newspaper in the world to publish editions by combining facsimile transmission with web offset printing.

The editions have been printed in the four major cities of Tokyo, Osaka, Nagoya and Kokura. Even with this manufacturing decentralization some sections of the country, such as Hokkaido, received their papers a day or two late because of slow railway transportation. Air transport of stereo mats or negatives was impractical because of frequent snowfalls in winter and fog in summer. Telephoto was of course considered but not adopted since it lacked sufficient accuracy for the many Japanese type faces. Facsimile machines were studied and then arrangements made with Muirhead & Co. of England to build special units for their purpose.

The scanning unit chosen has a scanning line of 1/12th of a millimeter (roughly 1/300 in.). It can complete the transmission of a 16 in. by 22 in. page within 20 min. A microwave circuit was chosen, instead of electric telecommunication.

Pages are made up in Tokyo and a reproduction proof of a complete page is then submitted to the Muirhead transmitter. The page image is then transmitted to the receiver in Sapporo, Hokkaido, through the microwave circuit. In the receiving unit it is reproduced as a negative film the size of the newspaper page. To reproduce as a paper positive would naturally mean loss of detail when converting to negative film. By producing a negative some operations are eliminated, and details conserved.

The high speed web offset presses used to print the newspapers are Hamada models. In the *Asahi Shimbun* operation standard offset plates were contemplated. Also, every effort was made to develop a dry offset system so that the water motion could be dispensed with and press speed thereby increased.

Bi-metal Plate Developed

None of these studies produced worthwhile results and the end product of various research programs was a bi-metal plate, made primarily of magnesium. The image area is formed with an oleophilic metal, and the non-printing areas are made of hydrophilic and oil repellent metal. This bi-metal plate did not eliminate the dampening system, and its corresponding problems, but did reduce them.

Production time from the making of the reproduction proof of a made up page in Tokyo, to the completion of the offset plate in Hokkaido 1000 miles away, is 82 min. The web offset press produces 70,000 newspapers an hour, ranging from 6 to 12 pages.

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A team of color experts from Germany were briefed recently on the use of color by American industry. M. J. Hoover, vice president, Sun Chemical Corp., told the team that

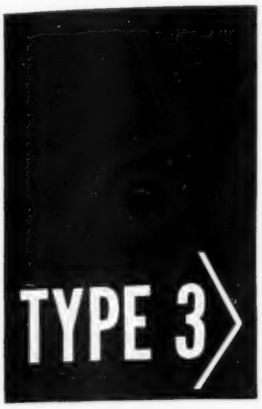
Manager of London *Times* Visits Goss Plant—Francis Mathew, right, general manager of the London (Eng.) *Times* views a replica of the Goss Headliner press. Explaining the features of the press is H. E. Hanson, manager, sales-administration, Goss Company, Div. of Miehle-Goss-Dexter, Inc.

There's more here than meets the eye

Now... 3 members in the

KODAK ESTAR BASE FAMILY

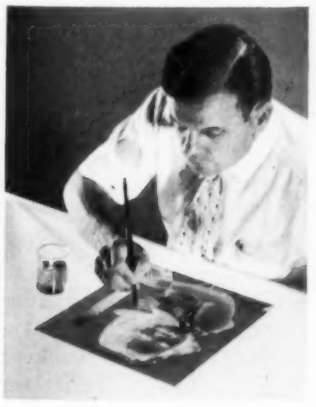
1. Kodalith Ortho Matte Film, Type 3, Estar Base **2.** Kodalith Ortho Film, Type 3, 7-mil Estar Base **3.** Kodalith Ortho Film, Type 3, 4-mil Estar Base



The extreme-contrast emulsion with the remarkable sensitivity to handle any kind of copy, regardless of density range involved.

WIDEST LATITUDES

Exposure variations of one-half to twice normal are possible. Less critical development times, too . . . a leeway of 2 to 4 minutes!



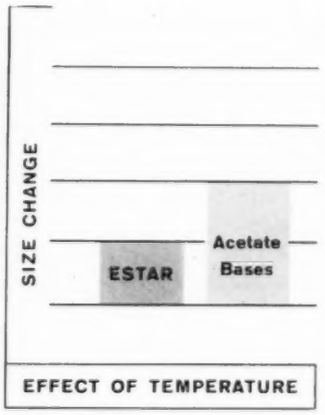
SOLID DOTS

Solid clean through to the base. Can be safely etched to the finest pinpoint. No veiling, halos, or soft edges around Type 3 dots.

HIGH SPEED

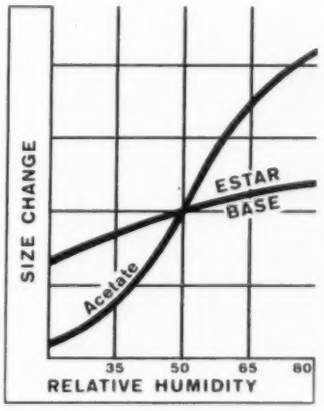
Exposure of only 6 seconds at f/22 is possible with a same-size line subject illuminated by two 35-amp arcs at 4 feet from the copy.

The new Kodak polyester base—flexible—with exceptional stability and superb emulsion adhesion.



TEMPERATURE EFFECT

This chart clearly demonstrates the stability of ESTAR BASE. It holds size two times better than conventional bases.



HUMIDITY EFFECT

Humidity variations have little effect on ESTAR BASE, as illustrated in this chart. Such quality simplifies critical register problems.

EASY TO HANDLE

Don't baby this film. It's tough, optically clear, resists kinks and abrasion, and dries rapidly due to the moisture-resistant base.

Graphic Reproduction Sales Division

EASTMAN KODAK COMPANY
Rochester 4, N. Y.

Kodak
TRADE MARK

For More Information Circle 71 on Reader Service Card

the use of color by American industries will provide patterns for other countries. He predicted a rise in the use of color in international operations.

After touring laboratories throughout the United States, Dr. Manfred Richter, head of color research laboratory of the German Federal Board of Testing Materials, stated that the United States is currently ahead of his country in applying techniques of colorimetry.

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Graphic Arts circles in England were impressed by the printing job done in connection with Princess Margaret's wedding. The *Daily Herald's* souvenir edition of May 6 was the first of the big British national dailies to publish full color, fine screen pictures on regular newsprint stock.

The four color illustrations were pre-printed by rotogravure at the Odhams plant in Watford, England. The webs were rewound and then shipped to the newspaper plant where they were run through the rotary letterpress for the black printing. About 250,000 copies were printed in this manner, while the regular black and white edition ran about 1,400,000 copies.

Inserting pre-printed webs into rotary letterpresses is not new and has been used widely in the U. S. It is accomplished by the "wallpaper technique" in which the inserted color sheet of advertising is designed so that no matter where the cut-off is made there will be at least one full ad on the page.

In the *Daily Herald* wedding edition, the insert was a double spread (page 1 and 12) in which the photo captions, text matter and headlines were printed by letterpress on the second press run in register.

This is made possible by the installation of electronic controls worked out in cooperation with J. F. Crosfield Ltd. The four color illustrations are printed on the rotogravure press, but with the gravure cylinders somewhat larger in circumference than the corresponding letterpress cylinders which will surprint the captions and text matter. The effect of this is to allow for some paper shrinkage during the web drying.

When the completed pre-printed web roll is inserted into the rotary letterpress the web tension is increased so that the paper can be stretched back to its correct page size. Variations during the run are compensated for by an electronic eye control. The necessary changes in the tension are then made to stretch the paper so that it keeps in register, or permit it to recede back to normal size. It is naturally easier to stretch paper to fit a predetermined register than to make it smaller. For this reason the computations for paper stretch and cylinder sizes are extremely important. Variations in shrinkage are measured by means of registration marks printed on the web. Registration of type to color can be controlled to about 0.040 in.

WHAT'S AHEAD FOR THE READER

Theme of *Printing Production's* August issue will be *Printing in Atlanta,* and a special section will highlight one of the fastest growing Graphic Arts centers in the country.

Among its contents will be features on: Some of the leading commercial printing plants in the Georgia capital; growth of Atlanta's printing industry; interviews with the city's Graphic Arts leaders; important specialty plants in that area; Atlanta as a supply center for the Southeast's printing industry, and a salute to the International Craftsmen's Assn. which meets in that city next month.

Next month's issue will also include the story of how the Milwaukee *Sentinel* handled a pre-printed metal foil insert in less than page width. Other stories will describe a system for controlling temperatures of metal on linecasting machines and the importance of interior color in a new printing plant.

In addition, look for the regular monthly features designed to help you manage your plant with greater efficiency. August will be another big value issue.

Harold B. Pressman, left, Carnegie Alumni president, congratulates Fred Smith, management consultant, upon his election as an honorary member of the Carnegie Printers Alumni. Smith spoke at the Alumni banquet.

Carnegie Alumni Elect Officers

Harold B. Pressman, Pearl-Pressman-Liberty Printing Co., Philadelphia, has been elected president of the Carnegie Printers Alumni. Other new officers are: W. Fred Rousseau, Union Carbide Corp., program chairman; Gene A. Musial, Herbick and Held Printing Co., Pittsburgh, secretary-treasurer, and David W. Ellis, also of Herbick and Held, recording secretary.

The Carnegie Alumni have also voted support for the recently revised Graphic Arts Department of Carnegie Institute of Technology.

Form New Strapping Company

A firm for marketing new developments in strapping and bundling has been formed by Chicago Printed String Co. and A. J. Gerrard & Co. The company will be known as Fiber Strap, Inc. Serving as president of Fiber Strap is Sol S. Weiner, president, Chicago Printed String; vice president is J. M. Gerrard, president of A. J. Gerrard.

The first product of the new firm is scheduled to be the Fiber-Strap machine, developed initially by Chicago Printed String and manufactured by A. J. Gerrard. The machine applies a heavy-duty rayon tape called Stur-d-Strap, which was also developed by Chicago Printed String, for packaging and bundling operations. The Fiber-Strap is recommended for bundling newspapers and magazines.

SUPERIOR

BECAUSE...
inserting-stitching-trimming in one operation decreases cost/thousand...

and BECAUSE...
Sheridan automatic saddle-binding equipment offers maximum hourly yield...

we invite Production Executives
to compare equipment claims and performance...and recognize Sheridan Superiority

SUSTAINED PRODUCTION—Sheridan inserter, gang stitcher and multi-knife trimmer units are designed and quality built to minimize non-productive downtime . . . a *bonus* value for increased production.

HIGH OPERATING SPEED — All Sheridan inserters are designed to run at the highest *practicable* production speeds up to 150/min., hour after hour . . . shift after shift. A Sheridan automatic stitcher-trimmer will *outproduce* any comparable machine.

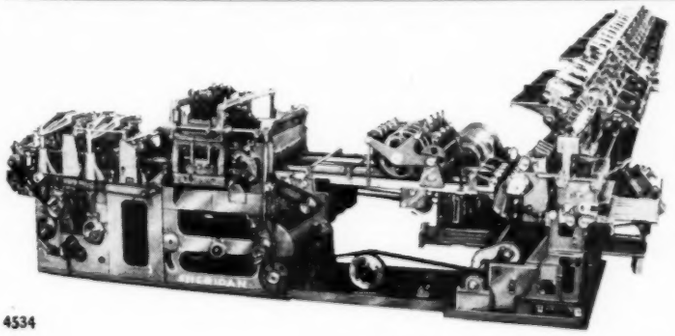
EASE OF LOADING & UNLOADING—inserter has low loading position to eliminate the need for platforms . . . provides improved continuity of loading. Trimmer delivery is at efficient pick-off height . . . can be arranged to suit your needs.

AUTOMATIC REJECT—of books of wrong thickness . . . without stopping production . . . is standard equipment. Caliper is accurate and easily set for each job.

UNDIVIDED RESPONSIBILITY — every unit is built by Sheridan . . . sold by Sheridan . . . serviced by Sheridan.

WIDE RANGE—the Sheridan will automatically insert,stitch and trim books from 3-3/8 x 7″ to 12 x 19″ one-up, from four pages to 64 or more, to one-quarter inch in thickness (one half inch book thickness), in a wide range of stocks, from thin bond and newsprint to heavy cover stock, with 3,4, or 5 trim cuts.

FLEXIBILITY OF APPLICATIONS—the Sheridan unit construction principle permits arrangement of unit to suit plant layout requirements. Additional units . . . inserter pockets, 3-knife trimmer, five knife trimmer, collecting drum or 2-up attachment . . . can be added at any time to suit production needs. Trimmers can be connected to side or perfect binders. Compare these points (and any others) of Sheridan superiority. Your choice will be Sheridan . . . as it has been with production-conscious plants everywhere. The T. W. & C. B. Sheridan Co. 220 Church Street, New York 13, New York.



4534

SINCE 1835 **SHERIDAN**

BRANCHES:
Chicago, Ill. Boston, Mass.
Torrance, Calif. London, England

For More Information Circle 157 on Reader Service Card

Construct Your Own Graphic Scaler Proportioning Device

By HOWARD L. COOK and JOHN F. WILHELM*

YOU can now make your own device for determining enlargements and reductions, and the percentages of each, of photographs, printing plates, drawings and other commercial artwork. We have assembled some do-it-yourself instructions for making a proportioning rule which we call the Graphic Scaler.

The Graphic Scaler, shown in the illustration, consists of three scales. The left hand vertical scale can be used for determining artwork dimensions in inches. The right vertical scale will provide the enlarged or reduced area dimensions in inches. The diagonal scale is for obtaining the per cent the original is enlarged or reduced.

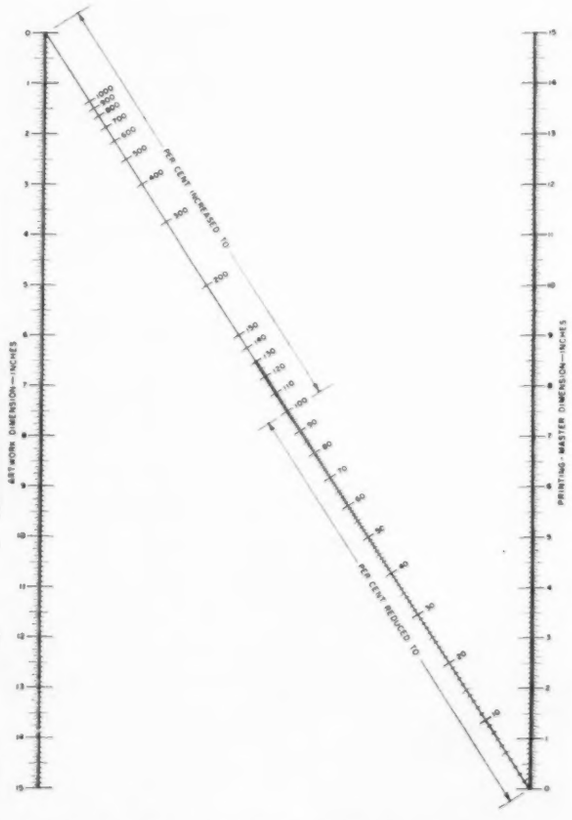
In constructing a Graphic Scaler, the scale lengths can be varied to accommodate all sizes of artwork. In the illustration, the scale lengths were originally 15 in. and graduated in both 32nds and 10ths of an inch. The diagonal scale was graduated in 1% increments to the 130% enlargement point.

The uses of the Graphic Scaler are many. Given artwork of a certain depth and width, the device may be used to determine per cent reduction or enlargement required for a desired width or depth. If original dimensions are to be reduced or enlarged to a desired per cent, the proportionate depth and width can easily be determined. Portions of the original art can also be determined in percentages as well as in the desired depth and width.

For example, if it is desired to strip a line drawing into a column of text which is 2¼ in. wide, you can find the per cent reduction and the final depth of the drawing. The Graphic Scaler, if made on a transparent base, can be laid over the drawing, and using the left hand scale, the width and depth can be determined.

Let's assume the width to be 7¾ in. and the depth to be 9½ in. To find the per cent reduction required to fit the drawing into the 2¼ in. column, a straight edge is used to connect the 7¾ in. on the left hand scale to the 2¼ in. on the right hand scale. The point where the straight edge passes through the diagonal is the per cent reduction which is 29% of the original in this case. Thus, the drawing requires a 71% reduction.

To find the final depth of the reduced line drawing in the column, the straight edge is used to connect the 9½ in. point on the left scale with the reduced to 29% point on the diagonal scale. The straight edge then passes through the 2¾ in. point on the right scale which is the final depth of the reduced line drawing in the column.



The Graphic Scaler can easily be constructed and provides adequate accuracy for proportioning photographs and art.

Method of Construction

The Graphic Scaler can be constructed on a piece of No. 2 Bristol paper stock. The scales are prepared as follows:

(1) Determine the maximum length of the left and right hand scales necessary for most layout requirements.

(2) Using a standard architect's or engineer's rule, lay out, in pencil, the left hand scale from top to bottom. At the farthest possible distance from the left scale in the horizontal direction, lay out the right hand scale from bottom to top. Be sure that the scale divisions of the two scales line up in the horizontal direction.

(3) By selecting suitable pairs of points on the two scales, determine by projection the position of a corresponding point on the diagonal scale. For example, to determine the reduced to 50% point on the diagonal scale, mark off the point at which a line connecting 10 on the left hand scale with 5 on the right hand scale intersects the diagonal scale. To check the accuracy, cross this first intersecting line on the diagonal scale with another line connecting another pair of points, such as 14 on the right scale and 7 on the left scale. Proceed in this manner until all points on the diagonal scale have been obtained. If it is planned to use the Graphic Scaler more for enlargements than reductions, it will be desirable to add more interim points on the diagonal scale above the increased to 130% point.

(4) Complete the Graphic Scaler by inking all lines, scale divisions, and lettering on the scale.

The completed Graphic Scaler can be reproduced photographically, or by printing on either paper or transparent film.

When the device is laid out with reasonable care and accuracy, the two vertical

*Commercial Engineering, Electron Tube Div., Radio Corporation of America, Harrison, N. J.

scales can be read to 1/100 in., depending upon which sides of the scales are used. The diagonal scale can be read to at least half of 1% up to the increased to 130% point. The accuracy the Graphic Scaler provides, therefore, is more than adequate for most commercial applications.

The following advantages can be obtained where the volume of work justifies the initial expense of constructing the Graphic Scaler:

The Graphic Scaler eliminates the need for calculations of artwork sizes and reductions or enlargements and reduces the chance of human error.

If it is reproduced on transparent film, it is direct reading which simplifies the preparation of artwork.

Supervisory personnel also may use it as a rapid means of checking artwork.

Printing Teachers To Meet

The 35th annual conference on printing education of the International Graphic Arts Education Assn. will meet at the University of Houston, Houston, Tex., Aug. 14-19. The conference program will consist of a series of workshop sessions which are expected to produce suggested courses of study in the Graphic Arts for all levels of the school system. Chairman of the conference is Prof. S. Wayne Taylor, University of Houston.

For details, write: Samuel M. Burt, executive secretary, International Graphic Arts Education Assn., 5723 Connecticut Ave. N.W., Washington 15, D. C.

SNPA Mechanical Conference Features ROP Color Contest

An ROP color contest and discussions of ROP color and packless mats are to be the highlights of the Eastern Division Mechanical Conference of the Southern Newspaper Publishers Assn. The conference is to be held at the Dinkler-Tutwiler Hotel, Birmingham, Ala., Aug. 14-16.

Entries in the ROP color contest will be exhibited at the conference; and awards will be made for the best printed advertisements or editorials in categories of one, two, three and four colors. An award will also be presented for the best entry in the show. Entries submitted must have been published between July 1, 1959 and July 10, 1960. The initial date was recently changed from Aug. 10, 1959 to July 1, 1959. Departmental group meetings for all mechanical crafts have also been scheduled.

Conference officials are: D. H. Lawson, Daily Press, Inc., Newport News, Va., chairman; J. R. Dowday, Durham (N. C.) *Herald-Sun*, vice chairman; Walter Johnson, Jr., secretary, and James Brotbeck, associate secretary.

Super Speed to Manufacture Pacemaker Tipper-Collators

Super Speed Printing Machinery, Inc., has purchased the manufacturing facilities for production of the Pacemaker tipper-collator from Printing Specialties, Inc. According to Ira J. Lipson, president of Super Speed, some changes have been made in the design of the Pacemaker (see page 69, this issue). Formerly, Super Speed was the distributor of the Pacemaker machine for Printing Specialties.

Beyond Duplication...

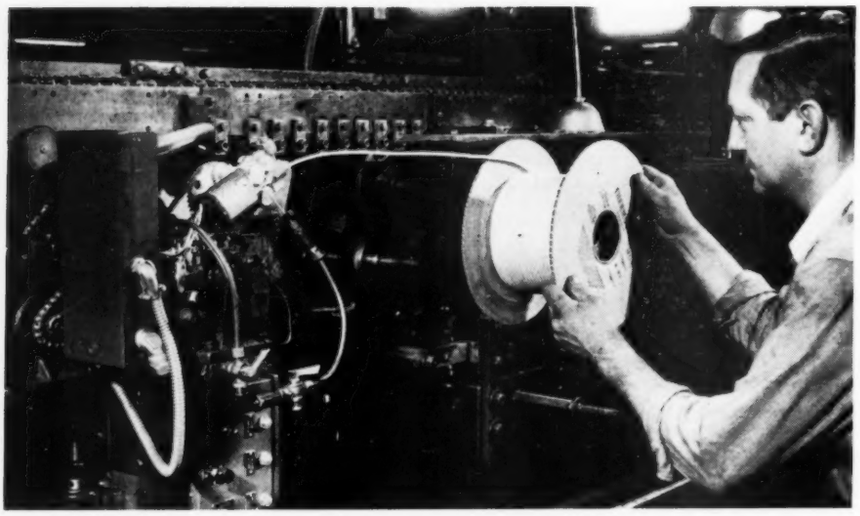
The Pharos of Alexandria Light House—seventh of the Seven Wonders of the World—guided ninth century ships to safety. Later destroyed, it could never be duplicated. Imperial, too, with quality type metal Plus and Service Plans, offers an unduplicated guide for today's printing production executives. Write us for details on this low-cost positive metal control.

Imperial

Imperial type metal company

Chicago 50 • New York 7 • Philadelphia 34

For More Information Circle 94 on Reader Service Card



Shown is a close-up of the adhesive system used to bind catalog overwraps at the W. F. Hall Printing Co., Chicago. The cord-like Thermogrip adhesive is fed from its reel to the Model AW applicator. The applicator melts, meters and then applies the molten adhesive.

New Fast-Setting Adhesive Adopted for Wrapping Catalogs

MECHANICAL and human handling often threaten damage to the wrappings and also the covers of mail order catalogs.

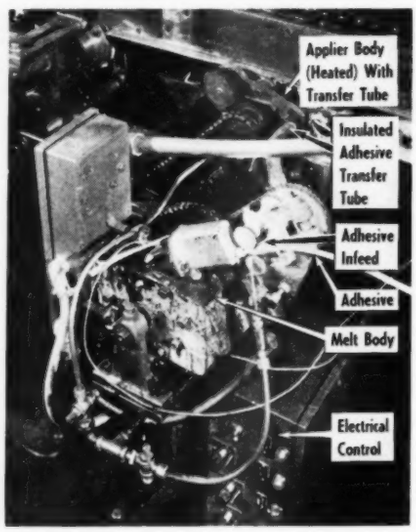
To offset this danger of damage through a secure wrapper bond and also to accommodate a record production volume of 1960 spring and summer mail order catalogs, the W. F. Hall Printing Co., Chicago, has adopted a quick setting adhesive system for use in wrapping operations.

The system consists of an applicator unit which melts a cord-like adhesive to a molten state and then applies it to the material to be bonded. Known as the Thermogrip applicator and adhesive system, the process was developed by United Shoe Machinery Corp. and its subsidiary, B. B. Chemical Co. Experiments in United's laboratory led to the installation of an AW model Thermogrip applicator at Hall's.

It is reported that Hall began its search for this new type of adhesive system because its record production volume for 1960 demanded an adhesive with a quick setting nature.

Specifically, the over-all wrapping situation facing Hall involves bonding a 70 lb. creped kraft sheet around the catalogs in such manner that they will be protected during all subsequent handling and mailing operations.

From the overwrap operation, the wrapped catalog travels along a conveyor belt, proceeds over a wheel and is dropped in an upright position on to a metal surface. Eight to 10 catalogs at a time are taken off the line by a mechanical device. Each catalog weighs between 4 and 5 lbs. This group of catalogs is then turned 90 deg. and placed on a conveyor to go to the sackers to be inserted in mail bags. Thus before the catalog wrappers are addressed and the catalogs mailed from the customer's various mailing points around the country, the catalog and its wrapper have experienced extensive and perhaps damaging mechanical and human handling.



The components of the standard adhesive applicator (shown) may be situated to fit any particular requirement. The wheel housing may be inverted or placed on its side.

Following are the details of the wrapping operation:

The catalogs are placed on a conveyor belt which carries them to the wrapping machine through which they pass various stations. Length of each station measures 24 in. At the same time, the creped kraft wrapper is automatically fed from the wrapper station toward the forming station where catalogs and wrapper meet.

How the Adhesive System Works

The adhesive system functions to apply the proper amount of Thermogrip hot melt adhesive to the passing wrapper as it moves into position around the catalog. The forming or shaping of the wrapper around the catalog is accomplished by means of guides which are positioned on the machine.

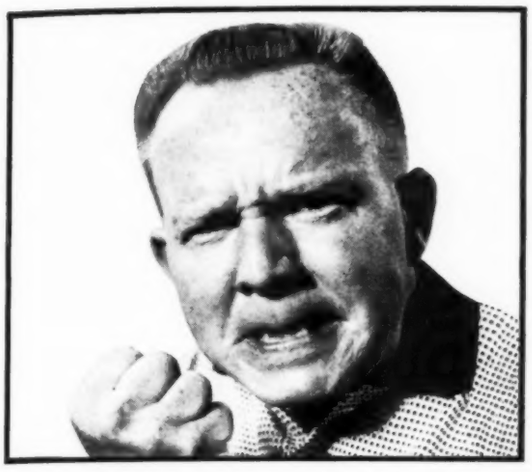
At the heart of the adhesive system is the applying wheel of the applicator. It is designed for the particular bonding job involved. For those catalogs, the wheel is designed to apply two bands of adhesive, each $\frac{1}{8}$ in. wide and about $\frac{1}{8}$ in. apart. Distribution of the adhesive can be in any pattern to $\frac{1}{2}$ in. wide. The thickness of the adhesive is held at about 3 mils.

The cord-like adhesive is reduced to its molten form by an electrically heated inlet block and melt body into which the adhesive is fed at a speed which corresponds to the speed of the passing wrapper. An automatic control stops oversupply of adhesive from the melt body if, during operation, the adhesive is not consumed.

Because of the quick set quality of the adhesive, there is 1 ft. of open distance from the point of adhesive application to the pressure roll which bonds the wrapper to itself.

Because the quick set quality of the adhesive reportedly produces a firm bond seconds after the wrapper is attached, its use presents possibilities of increased speed and capacity in the wrapping operation at

ROLL FILM?



"What, switch to Roll Film? I don't care how much it saves, I've always used sheet film, and I always will."

"Chemco Roll Film! Sure I use it. Why, I saved 24% on my litho film costs last year."

"From a management standpoint, Chemco Roll Film makes good sense. We increased production, cut costs, and saved time in the darkroom."

"Why didn't I start on Chemco Roll Film years ago? You know we're saving almost 30% on strip film cost."

Join the controversy, let the Chemco man show you what Roll Film can do for you.

chemco

CHEMCO PHOTOPRODUCTS COMPANY, INC.

Glen Cove, New York

Branch Offices: Atlanta Boston Chicago Cleveland Dallas New Orleans New York

Exclusive Agents in Canada: W. E. Booth Company, Ltd.

Exclusive West Coast Agents: California Ink Company, Inc.

For More Information Circle 40 on Reader Service Card

Catalogs move in stations, along the Grunlee catalog wrapping machine at W. F. Hall Printing Co., Chicago. In center of photo is the cord-like adhesive on a reel. It is at that point that the Thermogrip adhesive is applied to the wrapper around the catalog.

Hall's. Such an increase, though, would require considerable adjustments in the feeding to the machine. It would necessitate devising a way of increasing machine speed, of arranging the proper removal of wrapped catalogs from the machine, and of speeding the sacking and subsequent operations in the plant.

According to Hall's engineer, Robert Lukey, the quick set features of the adhesive would make possible a theoretical 50% increase in maximum speed if all these other problems could be solved.

But even more important than increased speed is the consistency with which the adhesive system accomplishes firm bonds on the wrappers and eliminates jamming on the wrapping machine, according to Henry Mueller, vice president in charge of plant operations at the Hall company.

Other advantages claimed for the system include the elimination of glue pots, spillage and open drums —all of which lead to adhesive waste. Also, it is said that Thermogrip is not affected by ordinary changes of temperature and humidity.

Users Report on Pressroom Advances

Successful results with several products specifically designed for use in newspaper pressrooms were reported by users at last month's ANPA-RI Mechanical Conference in Miami. These included an anti-offset spray, plastic press rollers, color register control, and a press wash-up device.

Frank McKinney, production manager of the Kansas City (Mo.) *Times* and *Star*, presented an analytical discussion regarding properties of composition, natural rubber, synthetic rubber and plastic press inking rollers.

It appears that a number of conclusions have been arrived at in field testing of plastic, or polyurethane, rollers by the manufacturers. These rollers, McKinney said, resist swelling, scuffing and column marking much better than any formulas known to date. He added that polyurethane rollers have excellent affinity for ink, yet seem to be impervious to the vehicle in present-day news inks. Manufacturers point out, however, that polyurethane rollers should not be used where moisture-set inks are used. Water and polyurethane are not compatible.

McKinney said that the first two plastic rollers were installed about a year ago in his plant. These were second impression—inside and outside—form rollers on a press unit operating on both day and night shifts. Today, he said, these rollers are printing at running speeds up to 50,000 papers per hr.

The rollers have not been reset since installation and show no signs of any damage. Subsequently, as the result of performance, the entire second impression of the press unit was dressed with the polyurethane type of roller. After six months usage, the additional rollers have performed equally well.

McKinney concluded: "I would be cautious, but very hopeful, about the future of these rollers. They hold promise of substantial economies in the pressroom because of the indication they will need less frequent settings and grindings. The big question is the life of the product. Only time will tell. Certainly a year or 18 months is not sufficient to give them favorable comparison with rubber and synthetics, which we know will last for many years."

Anti-offset Powder Spray

To prevent ink offset, especially on color supplements, because of processing and handling pressures, Al Rosene, production manager, St. Paul *Dispatch* and *Pioneer Press*, reported on the use of the Ortman-McCain dry spray.

The dry powder spray gun ejects the powder onto the sheet from a position above the former. The powder is non-toxic. During operation the system does create a slight dust deposit around the equipment. A disadvantage following installation, according to Rosene, was that mailers had difficulty in holding takes of 84 page papers when scooped from the conveyor, but this has been overcome.

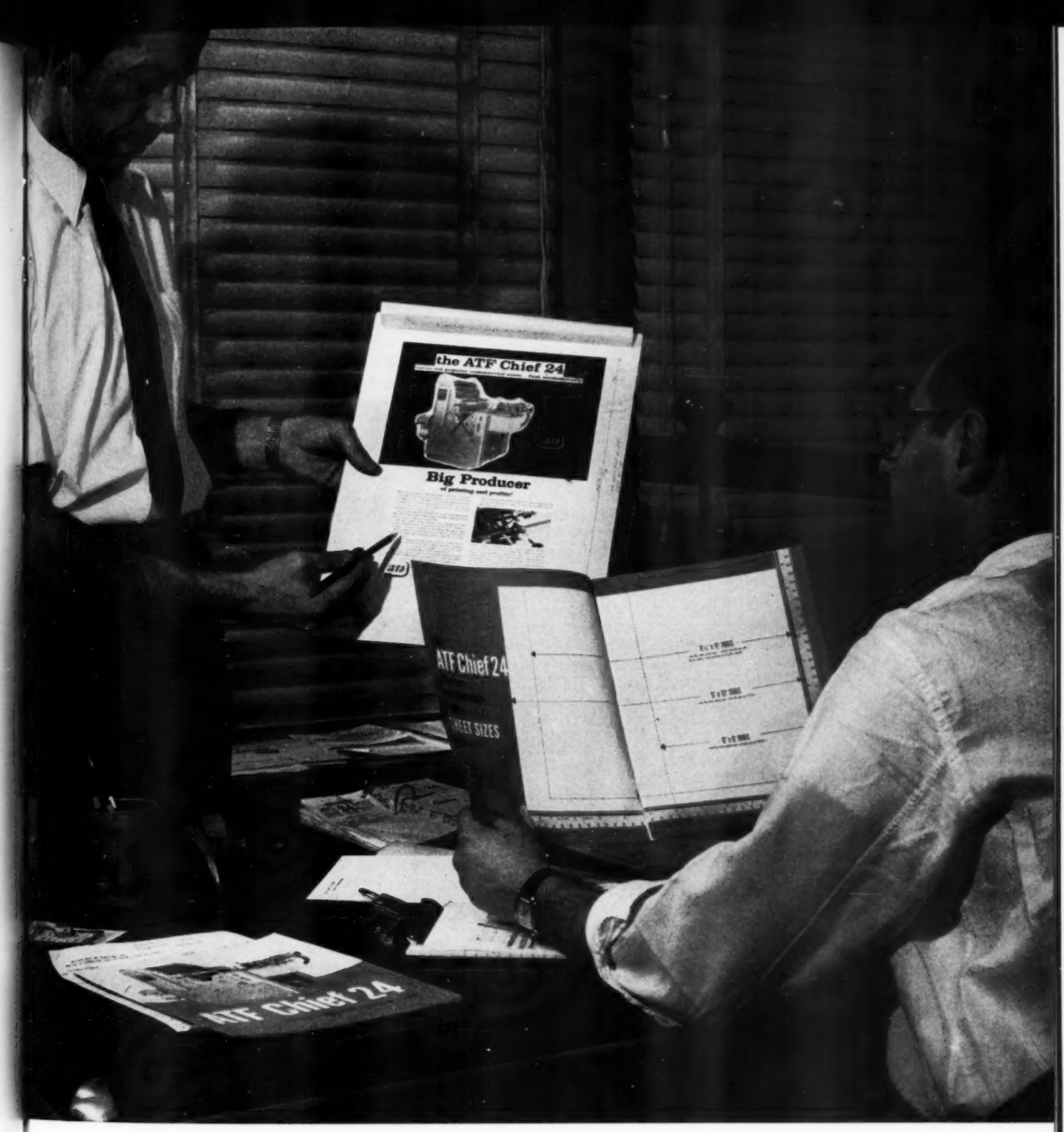
Rosene said the dry spray helps greatly in operation of the stuffing machine and the papers move along rapidly. He reported the spray equipment is now doing a fine job in offset reduction.

One of the helps in reducing offset on a color section, Rosene said, was insistence that the ink maker furnish inks with stronger pigment content and with less vehicle. This was accomplished at about the same cost with respect to mileage.

Use of the Crosfield color web register control in printing the La Crosse (Wis.) *Tribune* was described with the aid of slides by E. L. Burgess, secretary of that paper. Presses on which color is printed have been operated at 52,000 papers per hr.

At the *Tribune*, the red and yellow are printed on one unit and the blue and black on a second unit. Scanners mounted above the webs transmit impulses into relays. Burgess claimed register is kept within 0.001 in. accuracy. Under-

For More Information Circle 1 on Reader Service Card→



"This job is 8½ x 11" full bleed. If we put it on the new ATF Chief 24 we'll get at least 19,500 per hour."

THE CHIEF 24 FEATURES SPEEDS UP TO 6500 IPH—HANDLES 8½ x 11" (WITH FULL BLEED) OR 9 x 12" JOBS FOUR-UP. ***Write for Literature.***

ATF

American Type Founders

200 Elmora Avenue, Elizabeth, N. J.

ATF type faces used in this advertisement: Century Schoolbook with Italic and Craw Clarendon Book

side plate lockup is used on the Hoe presses.

Following Burgess' talk, some argument occurred from the floor regarding what is to be done when a color plate is out of register. Varying opinions regarding necessity for cocking plates to secure register on the press were given. Burgess, however, stated Sta-Hi equipment is used in the *Tribune* plant to secure plate registration in the first place.

One executive stated that with underside plate lockup color plates can be moved to secure register by cocking plates not more than 1/32 in. In another plant plates can be cocked not more than 3/64 in. The consensus of opinion, however, was that these are palliative measures. Attempts to make abnormal adjustments on the plate cylinder shouldn't be done.

Fast Color Press Washup

Prefacing his comment on a new press washup device with explanations of previous hand methods, Jack Brugg, pressroom superintendent of the Chicago *Sun-Times*, explained that the new device saved much time when cleaning press units.

He said that with the old hand washup method, 30 min. time is required for two men to clean up a printing couple. With the solid plate method as much as 800 lbs. of core waste newsprint is required. (See PRINTING PRODUCTION, Jan. 1960, page 55.)

With the Dayco portable washup unit, said Brugg, a press unit can be cleaned for change of ink in 3 min. The press units are cleaned without web operation. In reply to an inquiry from the floor, he doesn't think an appreciable amount of paper is lost in rewebbing the press.

Plan Press Runs in Advance

Communications between the news and advertising departments and the pressroom in daily newspapers is of great importance, according to conference speaker R. Cooney, pressroom superintendent, Minneapolis (Minn.) *Star* and *Tribune*. Efficiency of pressroom operation, he said, definitely is affected by one or all of the following: (1) Newspaper format; (2) Advertising volume; (3) Starting times and number of editions; (4) Equipment available in the plant, and (5) Union contract under which the employees work.

Cooney explained that the *Star* and *Tribune* supervisory personnel meets weekly with the ad department to plan positioning and scheduling of color. The news, advertising and pressroom departments coordinate the final makeup the preceding day of issue. Advance planning enables the pressroom planning foreman to schedule details, such as units to be used on each press, newsprint roll positioning, color decks to be used, necessary press adjustments and manpower scheduling. In this way, the pressroom is ready to start printing the paper without delaying the starting time.

The speaker illustrated the advantages of advance planning by citing preparation for an 80 page paper for city editions and 68 pages in the country editions. Full page four color ads were positioned on the back pages of three of the four sections. Six other one color and black pages were positioned inside the sections. The front page of each section carried news matter and full editorial color. Five presses were used to print the total press run of 320,000 copies.

Wants Core Standardization

Hy Shannon, production manager, Chicago *Sun-Times*, speaking on core handling, suggested that newsprint roll cores be standardized and supplied with a metal tip.

He mentioned that among six suppliers of newsprint there are three roll core sizes. He explained somewhat in detail the difficulties experienced in handling, storing and shipping cores economically for return to the paper mill. He proposed that the ANPA Newsprint Committee investigate and set up standards for core dimensions.

Transition from surface handling of newsprint to an underground method was graphically presented with slides by Rosene, a previous speaker. The underground conveyor system for handling newsprint rolls eliminates necessity for slow truck delivery from various warehouses and railroad sidings to the newspaper plant on busy streets. Construction of a new warehouse and addition to an existing tunnel now permits uninterrupted delivery of newsprint to the St. Paul *Dispatch* and *Pioneer Press*' reel room. (See PRINTING PRODUCTION, April 1960, page 44.)

Handling Ad Reproduction At the Detroit Free Press

An alternative method for reproducing bogus or dead horse display composition (reproduction of type matter in advertisements received from outside sources) was explained last month at the annual ANPA-RI Mechanical Conference. According to W. R. Coddington, mechanical superintendent, Detroit *Free Press*, such ads are reproduced on that newspaper by photocomposition pasteup.

A proof is taken of each ad when it is received. These proofs are stored in a cabinet until such time that they can be trimmed and prepared for pasteup in the actual size of the ad as it appeared in the paper.

The pasted-up proofs are produced with $1300 worth of equipment. At the *Free Press* one man during one shift can produce from 1000 to 1200 in. of ads in pasteup form. Illustrations are omitted from the pasteups. The finished pasteups are given to the chapel chairman for checking.

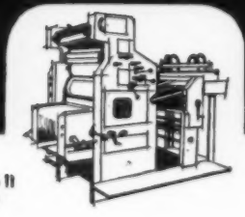
One of the advantages of the method, related Coddington, is that 75% production time is saved. In addition, heavy type storage is eliminated. The method also is advantageous in that employees can be trained in photocomposition techniques for possible future employment.

Film Features Manufacture, Care of Offset Blankets

A slide film dealing with the manufacture and care of offset press blankets has been produced by Vulcan Rubber Products Div., Reeves Brothers, Inc. The film is available for showings at Lithographers' clubs, printing schools and other professional groups.

Beginning with the base cotton fabric as it comes from the mill, the slides show blanket manufacture step by step. Concluding the presentation is a section demonstrating proper care of offset blankets in use. The production includes a total of 50 color slides and is accompanied by a recorded commentary.

Those interested in showing the production should contact: Walter A. McEvilly, Reeves Brothers, Inc., 1071 Avenue of the Americas, New York 18.



10,000 copies in four colors / size 20 x 26"
40,000 impressions / press running time: 5½ hours on the new ATF CHIEF 126

ATF

Would you like to see this Chief 126 press sheet? Ask your ATF Representative for a copy or write:

AMERICAN TYPE FOUNDERS

200 Elmora Avenue, Elizabeth, N. J.

ATF type faces used in this advertisement: Century Schoolbook with Italic and Craw Clarendon

For More Information Circle 10 on Reader Service Card

USE PROPER KINDS OF LUBRICANTS

From time to time someone wants to know what types of lubricants to use in linecomposing machinery. The different types mentioned here by company designation and name can be obtained from other reputable lubricant manufacturers. It is of prime importance to apply the proper types of lubricants to the machines under your care.

The lubricants used in our plant are as follows: *For distributors and keyboards*—Lubriplate No. 3, Fiske Bros. Refining Co., Newark, N. J. *For general oiling*—Lubricating oil No. 1120 NFO, N.Y. & N.J. Lubricant Co., 292 Madison Ave., New York, N. Y. *For Teletypesetter equipment* — Conoco Germ Processed Lub. Oil Light—Industrial Oil & Supply Co., 184 Avenue C, Woonsocket, R. I. *For cleaning magazines and machine parts*—Formula 602SC (non-flammable), The Penetone Co., Tenafly, N. J. *Grease for main cams (and also press gears)*—Texaco 191.—*Carl A. Braga, mechanical superintendent, Woonsocket (R. I.)* Call.

For the Reader

A chance to be paid for ideas which have netted savings in time, money and effort in your printing plant is offered readers of *Printing Production*. If your idea is accepted for publication it will be printed in the Idea File, a regular *Printing Production* feature, and a check will be mailed to you.

Send as many as you wish to: Idea File Editor, *Printing Production*, 1276 W. 3rd St., Cleveland 13, O.

Core Waste Rewinder for Newsprint

Many daily newspapers do not have sufficient core waste to warrant installation of a motorized newsprint core waste rewinder. As is well known, a quantity of newsprint is left on each core after the pressman has run down the newsprint roll as near the core as possible with reasonable regard for safety. There are many uses for this leftover stock in any printing plant.

The device described here is used in reclaiming what otherwise would be a considerable amount of white waste in a year's time. The cores upon which the newsprint is wound are shipped back to the paper mill when a sufficient quantity has accumulated. Before the cores are returned to the paper mill, the white stock remaining on them is rewound into usable size for other purposes. The end use of the reclaimed waste may be in the form of copy and proof paper cut to suitable size. Another outlet is to sell it to a commercial printer or stationer.

At the *Sentinel Star*, we cut salvaged newsprint stock as follows: Size 25 in. by 19½ in. for Vandercook black and white proof press; size 12½ in. by 19½ in. for Vandercook AB color proof press; size 9¾ in. by 12½ in. for composing and proof sheets; single column galley proof paper may be cut on a paper cutter from the 12½ in. by 19½ in. size. If the paper is to be disposed of to out-of-plant customers for printing and pad use, suitable sizes may be cut from the reclaimed stock.

Andrew J. Conover, Orlando (Fla.) *Sentinel-Star*, operates the newsprint core waste rewinder which he devised. The device is made primarily from standard steel pipes of various diameters. As is shown, the core with the reclaimable newsprint is placed on a spindle near the floor. The stock is wound on the triangular reel at the top of the frame by means of a hand crank.

Because of lack of space, specifications for making the paper salvaging machine cannot be printed here. The device, however, is made primarily from various diameters of standard steel pipe. The fastening of the frame members into a rigid unit is done by welding.

All specifications for assembling the rewinder in the two widths are shown on a blueprint which may be obtained from the undersigned at a cost of $10. The two models referred to are for 32 in. and 64 in. paper widths. The 32 in. device takes up a floor space of 3 ft. by 3 ft.; the 64 in. model takes up a floor space of 6 ft. by 5 ft.

As will be seen in the illustration, the core with the reclaimable newsprint is placed on a spindle near the floor. The triangular reel on which the stock is wound at the top of the frame is rotated by hand crank. When rewinding stock from the core, it is suggested that the felt side of the web be wound on the outer surface. About 50 to 60 revolutions of the reel will permit cutting through the wound newsprint. A Stanley

No. 299 knife or a linoleum knife is used for hand cutting.

On the 64 in. model, two 32 in. cores may be placed on the spindle at one time.—*Andrew J. Conover, P. O. Box* 2833, Sentinel-Star *Bldg., Orlando, Fla.*

SAVES REPACKING CYLINDER

When a sheet comes down crooked and is crumpled during impression, a mat is made in the tympan that often causes the following impressions on a single sheet to show light. Here is a quick and easy way to avoid repacking the cylinder to fix up the mat, especially near the end of the run. Moisten the spot with water. Sometimes it may be necessary to unreel the packing and moisten the spot for several layers of manila down. This will swell the packing and bring the mat out so that it will print almost like new for several thousand impressions.

Caution: Take care not to get too much moisture on the spot. Sometimes moistening the topsheet only will do the trick.—*Gene A. Shafto, The Mission Press, Merriam, Kans. Courtesy Kimberly-Clark Corp.*

MACHINE STOPS AUTOMATICALLY WHEN SLUG GALLEY IS FULL

On a TTS operated Intertype we have applied a device to stop the machine automatically when the

slug galley is full. This device may be applied to outstanding machines not so equipped.

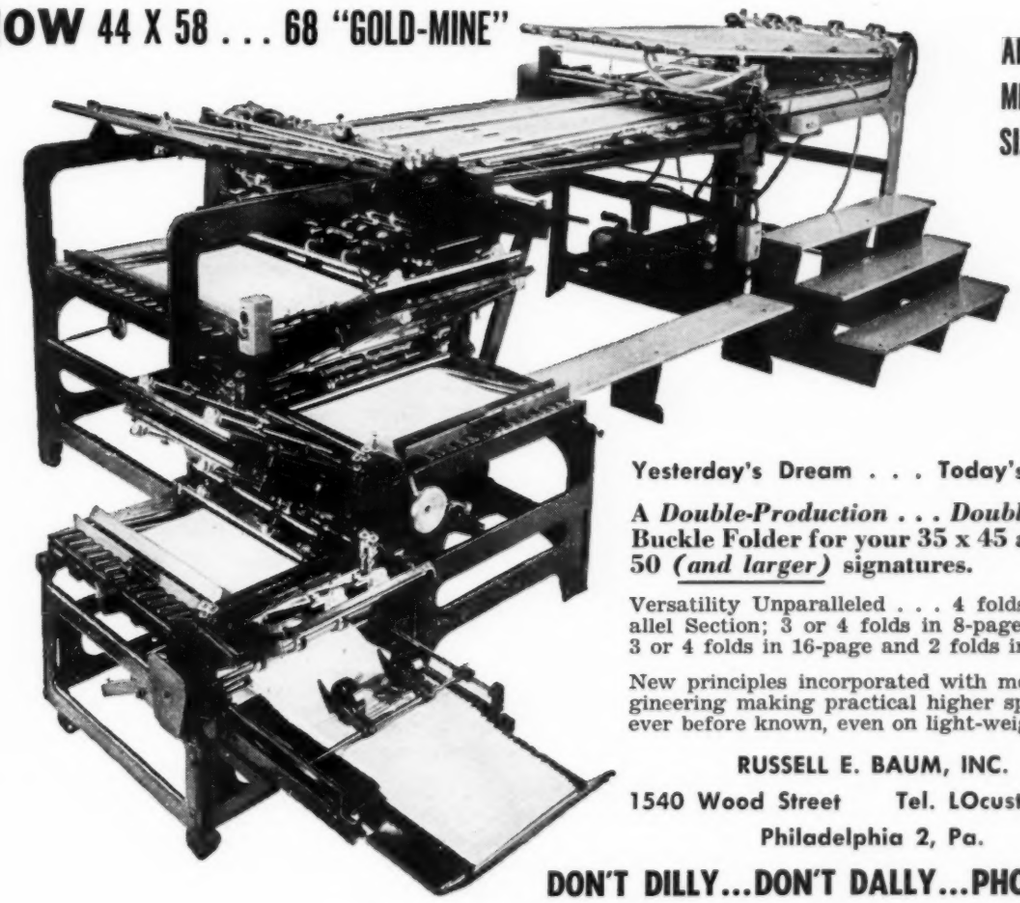
When the galley is nearly full, the left side of the slide or angle piece engages a lever mounted on a micro-switch to close the switch contacts and shut off the machine motor. This enables the machinist in our composing room to attend to other duties without constantly being in attendance at the machine.

The bracket upon which the micro-switch is mounted was made from a piece of brass column rule and formed as shown in the illustration. The bracket is fastened to the left-hand galley support. Materials required consist of a piece of brass column rule, four small screws, 10 ft. of insulated wire and the micro-switch itself. The wiring was connected in junction with the other safety switches.—*Franklin H. Elledge, mechanical superintendent, Brinkley (Ark.)* Argus.

SUBMITS LAYOUTS FIRST

When we pick up an order for letterheads or similar jobs where the customer says "Just set me up something and show me a proof," we do the following instead: We consider carefully the type of business involved, check up on all spelling, then make a neat pencil layout on tracing paper. We submit this to the customer for corrections before setting it up in type. The resultant savings are passed along to the customer for better business and goodwill.—*S. C. Bardoff, Owner, S. D. Bardoff, Printing,* 114 *East St., Baltimore* 2, *Md. Courtesy Kimberly-Clark Corporation.*

NOW 44 X 58 . . . 68 "GOLD-MINE"



ALSO PRECISION MFD. in 36 X 48 SIZE and 39 X 52

Yesterday's Dream . . . Today's Reality

A *Double-Production . . . Double Profit* Buckle Folder for your 35 x 45 and 38 x 50 *(and larger)* signatures.

Versatility Unparalleled . . . 4 folds in Parallel Section; 3 or 4 folds in 8-page Section; 3 or 4 folds in 16-page and 2 folds in 32-page

New principles incorporated with modern engineering making practical higher speed than ever before known, even on light-weight stock

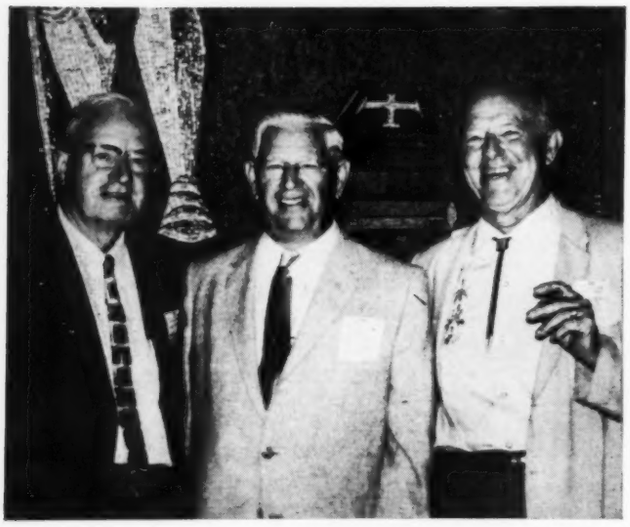
RUSSELL E. BAUM, INC.

1540 Wood Street Tel. LOcust 8-4470

Philadelphia 2, Pa.

DON'T DILLY...DON'T DALLY...PHONE COLLECT

For More Information Circle 18 on Reader Service Card



Now permanent Florida residents in retirement who attended ANPA Conference, are, left to right: Richard Fitzgerald, former mechanical superintendent, Miami *Herald;* John W. Park, former production manager, Chicago *Tribune,* and Charles Frederickson, former mechanical superintendent, Westchester County (N. Y.) Publishers, Inc. (See story below of organization for such newspapermen.)

Two recipients of special plaques awarded for service on the ANPA Mechanical Committee were, left to right, George F. Marshall, Portland (Me.) *Press-Herald* and *Express,* and William E. Gibbons, Roto-Color, Inc., St. Charles, Ill. The plaques were presented by Richard E. Lewis, ANPA Research Institute. Similar awards went to L. J. Griner, Ed H. Evers, and Joseph McMullen (posthumously).

Retired Newspaper Executives Form Florida Organization

Former newspaper production and mechanical executives residing in Florida now have their own organization. Called the Retired Newspaper Executives Club, the first meeting in Miami Beach in April attracted 35 former mechanical men.

The idea was suggested originally by L. J. Griner, production vice president of the Miami *Herald.* Richard Fitzgerald, former mechanical superintendent of that paper, is temporary chairman.

At the initial meeting, a speaker discussed the Miami *Herald's* training program for all departments. It is anticipated that summary reports of national and regional newspaper mechanical conferences will be presented at future meetings. Programs will be designed to keep members informed regarding fast moving newspaper technology, according to temporary program chairman, Charles Frederickson, who retired from the Westchester County (N. Y.) Publishers some time ago.

Honorary president of the group is John W. Park, former production manager of the Chicago *Tribune.*

PRINTING PRODUCTION was informed that membership in the group includes active executives and manufacturer and supplier representatives. In general, however, membership has been divided into three categories: (1) Those who have retired; (2) Those who should retire, and (3) Those who are thinking about and would like to retire.

Temporary chairman Richard Fitzgerald may be communicated with at 547 Majorca Ave., Miami Beach, Fla.

Modifying Existing Stereotype Caster

Changes necessary to modify existing equipment to cast stereotype plates from packless mats were outlined for mechanical men attending last month's ANPA-RI Conference in Miami. The carefully detailed report was supplied by Peter B. Romano, chief engineer, Autoplate Div. of Wood Newspaper Machinery Corp.

Romano explained the differences in plate dimensions occurring when plates are cast from hand packed and packless mats in existing machines. His discussion was related to Junior, Automatic and Pony Autoplate equipment.

The speaker said that reports from stereotype superintendents indicate maintenance of the vacuum system in casting plates from packless mats has become top priority procedure to insure adequate cooling and proper seating of the mat in the casting box.

The packless mat, being thicker than the hand packed mat, increases the degree of insulation between water and plate. . . . Heat conductivity through the packless mat is very slow and limited, whereas heat conductivity through the cylinder, which is in direct contact with the cast plate, is much more rapid and effective. . . . It is desirable to actually reduce the amount of water to the casting box and increase the amount of water to the cylinder or core of the machine. Reports from stereotype superintendents . . . advise that the water to the casting boxes on Automatic Autoplates has been reduced approximately 25%, thereby increasing the volume to the cylinders a like amount. Proper and periodic maintenance of the cooling system is essential for good operation.

The speaker pointed out that equipment modified for the packless mat may also be used for the hand packed mat. The only requirement is that the head and foot bolsters of the hand packed mat be packed with approximately 0.030 in. to 0.035 in. thick packing.

Romano's concluding comments were: "Successful use of the packless mat in the casting operation does not require any new or revolu-

tionary techniques. Instead, merely a more rigid control and adherence to the procedures and tolerances which have always existed for efficient operation and production of a quality product. The tolerances which were formerly acceptable with the hand packed mat are no longer satisfactory for the packless mat."

Patching Partial Page Color

Daily newspaper advertisers are insisting more and more on partial page ROP four color advertisements, said Donald B. Lytle of Reilly Electrotype Div. of Electrographic Corporation. His firm furnishes full and partial page three and four color stereotype mats as well as plates for clients to daily newspapers.

He commented that the patching of a partial page three color mat (as furnished by his company) into a black editorial page entails no problems. In cases where a partial page four color ad is to be patched into a black editorial page, it is necessary to furnish two black mats each containing a blank section where editorial matter is to be patched in. Using slides, he explained the technique involved in producing the page for the regular edition of the paper in which the ad is to appear.

Lytle said experience has shown that from 8 to 12 casts can be made from a single mat employing the patching method. The patching system has been used on regular stereotype mats, but has not as yet been developed for the packless mat.

NAPL Plans 1962 Convention In Los Angeles, Sept. 19-22

It has been announced that the 30th annual convention and exhibit of the National Assn. of Photo Lithographers will be held in the Hotel Ambassador, Los Angeles, Sept. 19-22, 1962. Other NAPL convention dates are: 1960—Conrad Hilton, Chicago, Oct. 5-8; in 1961, Hotel Commodore, New York, Sept. 27-30.

According to reports, all exhibit space has been sold for the 1960 show in Chicago, where 116 exhibitors will occupy 196 booths. It is also reported that only 30 spaces remain to be sold for the 1961 show in New York.

Bundling Machine For Weekly Paper

Newspapermen attending the ANPA-RI Mechanical Conference in Miami last month heard of a novel bundling machine developed for use on the Williamsport (Pa.) *Grit*. Narrator of the slide presentation was Ralph R. Cranmer, *Grit's* executive vice president.

He prefaced his address by stating that the *Grit* is a nationally distributed weekly newspaper with a circulation varying from 825,000 to 1,000,000 copies weekly. It is distributed entirely by mail and leaves the mailroom in U. S. mail sacks. Round wrapped bundles vary in count from five to 30 copies.

Before development of the machine, bundles were labeled by hand and the number of copies for each bundle were marked by hand on the wrapper. The bundles were also wrapped manually with the wrapper paste being applied by hand just before bundling.

With the old hand method it was necessary to limit the kraft wrappers to four sizes only.

Cranmer related that his firm got in touch with Technical Service Co., Denver, Col., to explore the possibility of developing a machine

ANPA Conference Pictorial

(All names read left to right)

1—Vernon R. Spitaleri, executive vice president, Sta-Hi Corporation, and Mr. and Mrs. Julian J. Eberle, production manager, Miami *News*, smile for the camera.

2—Irvin Cook, mechanical superintendent, and Frank Huntress, III, treasurer, San Antonio (Tex.) *Express and News*, observe Peter Finlayson at Photon photocomposition machine keyboard.

3—A jovial group includes Emory Worthington, E. W. Worthington Assoc., Ridgewood, N. J.; Frank M. Little, composing superintendent, Howard Measmer, stereotype foreman, and James Johnston, mailroom foreman, all of Youngstown (O.) *Vindicator*.

4—A Rouse band saw is center of attraction of John N. Rausch, production manager, Aurora (Ill.) *Beacon News*; Harry Knoll, H. B. Rouse & Co., and Arthur W. Kramer, production manager, Joliet, (Ill.) *Herald News*.

5—Pausing in front of Ludlow's booth were: Ned Davis, assistant production manager, Shreveport (La.) *Times* and *Journal*; Mack Forrest, Ludlow Typograph Co., and George S. Anton, pressroom foreman, Shreveport (La.) *Times* and *Journal*.

which would eliminate the slow hand method. Technical Service came up with a plan for using proved components wherever possible, each of which is in regular use and designed for a specific purpose. The speaker said these devices "have been integrated into a machine which has every appearance of homogeneity."

How Machine Works

In designing the machine, the following components were used: Hopper from a Sheridan inserting machine, Wallastar underfeed wrapper and stack starter, Davidson office machine paper feeder, and an industrial vacuum pump. Technical Service designed a wrapping table and an electric memory system. The memory system was built by North Electric which essentially is Bell telephone relay equipment. The Miner Machine Co., also of Denver, constructed the label feed section and coordinated the components.

The papers are not taken from the press delivery. The papers are counted down for the bundle and transferred to a conveyor. The operator working at the equivalent of a keyboard presses keys to cycle the number of papers to be wrapped. The memory system also causes the stack of papers for the bundle to pass over the wrapper feed which ejects the exact length wrapper to suit the number of papers in the bundle. Glue is applied to the wrapper simultaneously with the cutting of the wrapper from the roll.

While the bundle resting on the wrapper is being moved by the conveyor, the Davidson feeder feeds the label to the label wheel and passes over the gluing roller. When the counted bundle and wrapper reach labeling position the label is applied to the wrapper. An operator makes the final wrap by hand.

Cranmer reported that 10,000 papers per hr. can be processed on one machine with less than two men. In conclusion he stated the next logical development step would be to take the papers directly from the press delivery with automatic delivery through a programmed count. Three additional machines have been ordered because of satisfactory performance of the prototype model.

Register Control for Newspaper Color

A carefully worked out system for controlling register in newspaper color work was reported last month by Julian J. Eberle, production manager of the Miami *News*.

Speaking in Miami at the ANPA-RI Mechanical Conference, Eberle prefaced his comments by mentioning that color register at the *News* actually is the responsibility of the engraving, stereotype and pressroom superintendents. The speaker said his production personnel do not claim to have solved all color register problems.

"Registration begins in the engraving department," Eberle said. "It is here that the initial registration is made which must be maintained by subsequent procedures in all of the other departments in the plant."

Describes Register Procedure

Register marks are placed in each corner of the master negative to be made, and one each at top and bottom for registering the plates while taking engravers' proofs. Fine lines are ruled along the sides in the clear area of the master negative, as well as a fine cross line at the top of the page. These will become the stereotype chase lines.

To maintain register from negative to negative at the *News*, celluloid tabs are used. These are standard devices employed in the offset field. The tab with the peg is placed at upper left on the master negative. The tab with the hole in it is attached at lower left.

Overseas visitor at the ANPA Mechanical Conference in Miami was Dr. A. Matuschke, managing director, Axel Springer & Sohn, Hamburg, Germany.

When molding from the plates in the stereotype department, position of the plate on its aluminum base on the molding machine bed is unimportant. Packless mats are hot molded by direct pressure.

After the plates have been cast they are registered in the stereotype plate registering machine. The tension plate lockup pockets are cut while the plate is in registered position in the machine.

Color Production Schedule

In the pressroom, Eberle said, the foreman consults the weekly color production schedule containing information as to what color is planned, page position, number of sections, and total estimated pages.

The pressroom superintendent prepares a new run sheet for the day. It shows the web lead and the lead rollers to use, cutoff compensator settings and color compensator settings, web lead number, size and number of sections, total pages and what color runs where.

A chart on the window outside the press control room provides the electrician with daily operation data, such as presses to be operated, crew starting time, units to be connected to each folder, which folder is to operate, and the web lead number for the Hurletron electric eye color register control. Each folder has more than 10 different standard color leads and each one carries its own number designation.

Eberle concluded his address by explaining the pre-set conditions under which plates are locked on the press cylinders. The color plate position is determined by the pre-register machine from the register marks in the original engraving.

Negative or Positive Color?

Two interesting addresses at the conference were those about processing color separations by the negative and positive methods.

David Dornberg, photoengraving superintendent of the St. Paul (Minn.) *Dispatch* and *Pioneer*

Press, told about the use of the positive color separation method. Don Shortell, production manager of the St. Petersburg (Fla.) *Times*, spoke on the use of negative color separation.

Dornberg, in reviewing the two methods granted that perhaps the greatest advantage of the negative system is its simplicity. "If everything goes right," he said, "you can simply stick a color negative and a pair of register marks in the enlarger and make three prints through three different filters onto a panchromatic print paper and you're done.

(*Continued on Page* 82)

Exhibits at ANPA Equipment Show Provided Interesting Information

(All names read left to right)

1—Robert Schmidt and Marvin Teutsch, Radio Corp. of America, explain the RCA newspaper conveyor to Thomas Sanders, composing room assistant foreman, Ralph Ollivier, engraving foreman, and Charles Cole, business manager, all of the Toledo (O.) *Blade*.

2—R. R. Richter, Dayton Industrial Products Div., Dayco Corporation, shows Dayco fountain divider to Lonnie W. Horne, pressroom foreman, and James A. Cooper, dispatch and control manager, both of the Columbus (Ga.) *Enquirer & Ledger*, and J. A. Bollmer, Dayton Industrial Products.

3—One method of eliminating ink mist is described by William Murdock, Trion, Inc., to Dorrance D. Roderick, Jr., business manager, El Paso (Tex.) *Times* and *Herald Post*, and Lawrence Clayton, Trion.

4—Observing operation of Cutler-Hammer stacker for mailrooms are: C. P. Feldhausen, engineering superintendent and Roger J. Hayes, engineering department, Cutler-Hammer, Inc., and B. G. Burke, production manager, San Diego (Calif.) *Union* and *Tribune*.

5—A live demonstration of bundle handling equipment was provided by L. A. Douglass, U. S. Steel Supply Div., for Hugh McGowan, mailroom superintendent, Ft. Lauderdale (Fla.) *News*; Bill Murdock, Trion, Incorporated, and Millard Cain, production manager, also of the Ft. Lauderdale *News*.

6—Harold Bean, William Carr, and George Alston, all machinists of the Miami *Herald*, listen to Frank M. Suma, Revere Copper & Brass, Inc., discuss etching procedures.

EQUIPMENT AND SUPPLIES

You may easily and quickly obtain additional information on the new equipment, supplies and services mentioned on these pages by completing the special Reader Service Card conveniently found in this issue.

VISUAL CARD CONTROL SYSTEM HELPS SCHEDULE PLANT OPERATIONS

A control system which can be applied to scheduling operations in sales, dispatching, apprentice training, machine or man loading, etc. is available from the Graphdex Company. It is called the Cardogram system after the incised cards which are the heart of the system.

Information is typed, written or stamped on the card which can also be combined with a color code. The system is said to eliminate the need for special indexing cards or cross references.

In a production control system, the job number, quantity, scheduled completion date and destination can be included on the Cardogram form. Colored signals, inserted next to the Cardogram, indicate the progress of the job so that the complete picture is available at a glance. Circle No. 267 on Reader Service Card.

HAND HELD PRINTING PLATE ROUTER

Dremel Manufacturing Co. has announced production of a lightweight tool for small routing jobs on letterpress plates. Called the Moto-Tool, it permits routing out blemishes, high spots, etc. on metal as well as on rubber plates. The 13 oz. unit is held in the hand enabling the operator to correct the plate without removing the form from the press. Circle No. 258 on Reader Service Card.

DU PONT CLAIMS BOOKBINDING MATERIAL PROVIDES IMPROVED COVER PROTECTION

A bookbinding material called vinyl PX cloth has been developed by E. I. du Pont de Nemours & Co. The material is used in conjunction with a process which utilizes three components: A vinyl impregnated book cloth, a primer coat, and a clear protective film.

The process consists of laminating the film called Fabrilite V-2 to lithographed vinyl PX cloth which is pretreated with Fabrilite No. 9148 primer coat. Advantages are said to be improved resistance to abrasion and soiling, and better cleanability. Circle No. 273 on Reader Card.

NEW CLAMPS FOR ROYAL ZENITH PRESSES DESIGNED FOR PAPER OFFSET PLATES

Paper plate clamps for Royal Zenith Corp.'s line of offset presses are now available. The clamps are said to make paper plate changes possible in less than 30 sec. The clamps replace regular plate clamps and allow the running of direct image paper plates.

The front clamp holds the plate by means of an eccentric motion while the tail clamp consists of a spring loaded hook bar. The tail clamp, according to the manufacturer, maintains constant tension on the plate even after it has been wet and stretched. For special jobs, the clamps may be adapted for use with two half plates. Circle No. 264 on Reader Service Card.

MIEHLE TWO COLOR OFFSET PRESS HANDLES SHEET SIZE TO 20 X 26 IN.

A two color offset press manufactured by the Miehle Company and called the Miehle 25 has been introduced. The press, said to be identical in operating features to the company's 29 and 38 two color presses, handles sheet sizes from 11 in. by 16 in. to 20 in. by 26 in.

Featured as standard equipment on the press, which is claimed to have a maximum speed of 7500 sheets per hour, is Miehle's continuous feeder and delivery. Among other features of the press are swing grippers and four ink form rollers in three different diameters.

The second color plate cylinder is adjustable across and around the cylinder from outside the press and can be adjusted while press is running. The second color unit moves out of the way to provide access to the plate cylinder and rollers.

The Miehle 25 utilizes a common impression cylinder for its two units. This, the company states, assures control of the sheet throughout the printing cycle because it is held in register by the same set of grippers. Circle No. 276 on Reader Service Card.

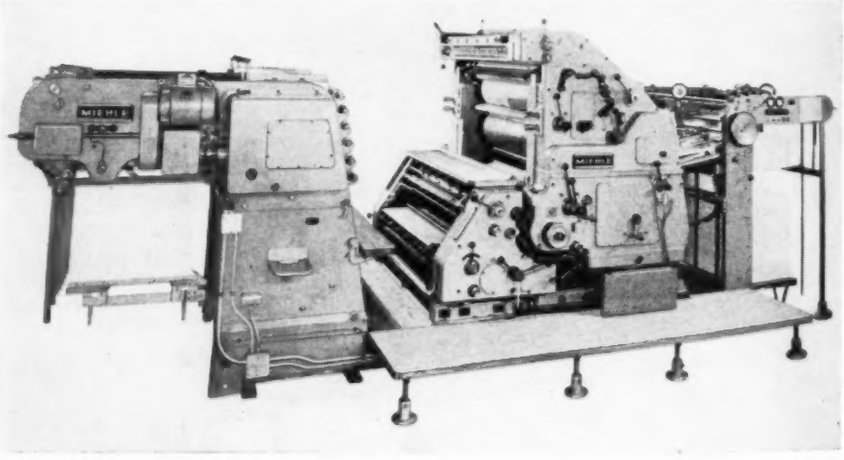
PHOTOELECTRONIC EVALUATOR MEASURES PERCENTAGES OF TINTS

A photoelectronic halftone tint evaluator which determines percentages of halftone tints has been introduced by Tintometer.

The device is said to electronically measure halftones, tints or Ben Day values. The instrument consists of two units, a controlled light source and a photoelectric meter. Among the advantages mentioned are the matching of tints, either negative or positive, and the standardizing of tint values within a plate. Circle No. 257 on Reader Service Card.

PHOTOENGRAVING STRIPPING TABLES FEATURES STEEL AND GLASS TOPS

Bar-Plate Manufacturing Co. has made two new wet stripping tables available to photoengravers. The Micro-Perfect wet negative table features straightedges on three sides and fluorescent lighting which is diffused by an etched glass top.



Miehle 25 two color offset press has such features as: Continuous feeding and delivery, swing grippers, common impression cylinder, reported maximum speed of 7500 sheets per hr.

Surface of the Micro-Perfect wet layout, stripping and lineup table is made of stainless steel. Its mechanical mechanism includes a steel straightedge which operates from machine cut roller chains.

Both tables are furnished with troughs on three sides which drain into a jar mounted underneath. The two units will tilt to any angle and are available in sizes of 20 in. by 24 in., 24 in. by 36 in., 30 in. by 40 in., and 40 in. by 52 in. Circle No. 255 on Reader Service Card.

REDESIGNED TIPPER-COLLATOR FEATURES VARIABLE SPEED CONTROL

Super Speed Printing Machinery, Inc., has announced the production of an improved and redesigned model of the Super Speed Pacemaker Tipper-Collator. The unit was formerly manufactured by Printing Specialties, Inc.

According to the company, the machine is capable of 3000 sheets per hr. and can be adapted to business and multiple part forms.

Some of the features of the machine are: Variable speed control; safety foot switch; noncorrosive glue petcock, and 148 needle positions which allow various needle bar combinations for spot gluing from 1/32 in. to 26 in.

Collator cabinets are removable. Circle No. 279 on Reader Service Card.

FULL RANGE CLARENDON SERIES TYPE FACE

Egizio, a full range Clarendon style type face series offering medium, medium italic, bold, bold italic and condensed letters has been made available on American point body by Amsterdam Continental Types and Graphic Equipment, Inc. Described as an Egyptian face in the contemporary idiom, the type is available in sizes ranging from 6 to 72 pt. Reportedly, Egizio was designed especially for photomechanical reproduction with thick, strong serifs for maintaining long-run legibility. Circle No. 283 on Reader Service Card.

WALL BOARD DEVICE ORGANIZES AND HOLDS VARIOUS PAPERS

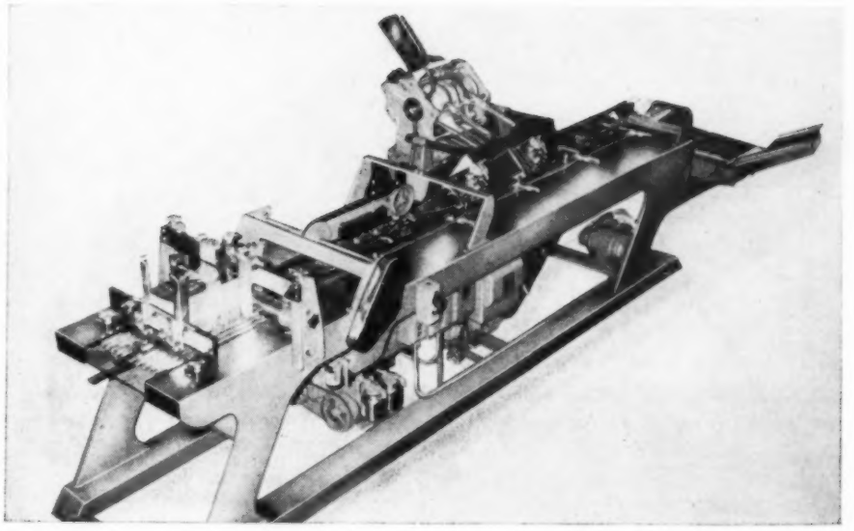
A device manufactured by the L. D. Blehart Co. is designed to organize and hold papers such as orders, job tickets, route slips, proofs, etc. Called the Klip-All, the device is essentially a board on which clips are mounted to hold papers.

The clips are 2 in. by 2¼ in. and are powerful enough to hold 3/4 in. of papers. The board is manufactured of lightweight metal and comes equipped with two brackets for wall mounting. The board is ruled into various divisions and is provided with plastic holders for the insertion of heading cards.

Two basic groups in four sizes are available. One is a calendar style which is arranged for daily, weekly or monthly periods. The daily calendar style of board is illustrated.

The second group is called a utility style and is set up for departments, branches, production steps, customers, locations, etc.

Size of the board illustrated is 26 in. by 44 in. by 3/4 in. Weight is 14 lbs. Circle No. 269 on Reader Service Card.



Model IM-12 magazine inserting machine will feed, open and insert at rate of 12,000 per hr.

MAGAZINE INSERTING MACHINE RATED AT 12,000 PIECES PER HOUR

Magnacraft Manufacturing Co. has announced the development of a high speed magazine inserting machine which will feed, open and insert one or more pieces of printed matter.

The Model IM-12 inserting machine, as stated by the manufacturer, accepts magazine size pieces and inserts them at speeds up to 12,000 per hr. It can be equipped with one or more additional feeders to permit several inserts into the same magazine. Circle No. 277 on Reader Card.

FLUORESCENT PRESSURE SENSITIVE STOCK

Fluorescent Flex-Stik, a paper stock that combines fluorescent colors with rubber saturated Flex-Stik B pressure sensitive stock, has been introduced by Kleen-Stik Products, Inc. Available in the new line are fluorescent orange-red and orange-yellow colors combined with 0.004 in. thick Flex-Stik.

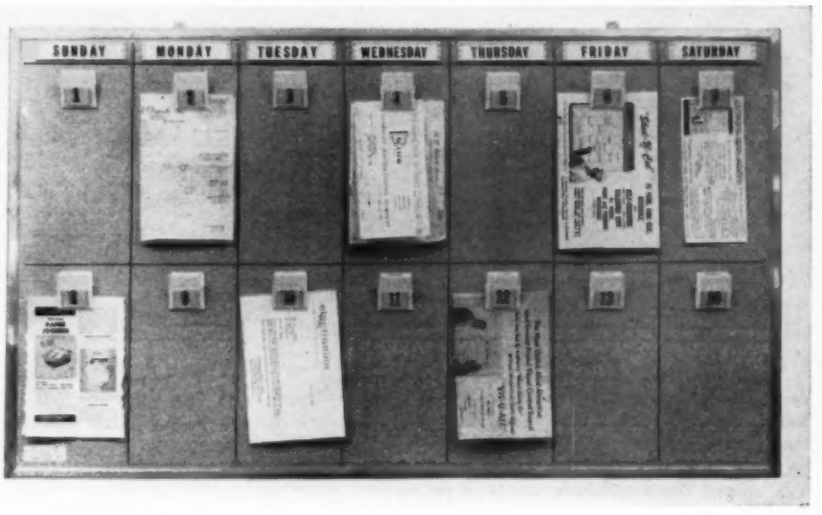
Reportedly, the stock is moisture-resistant and retains its brilliance through all kinds of weather. Also, it is claimed that the stock is easily removed. It is recommended that Fluorescent Flex-Stik be used for bumper strips, safety signs, posters and political campaigns. Circle No. 284 on Reader Service Card.

FORM-O-VAC VACUUM SCORCHER TREATS MANUALLY PACKED AND PACKLESS MATS

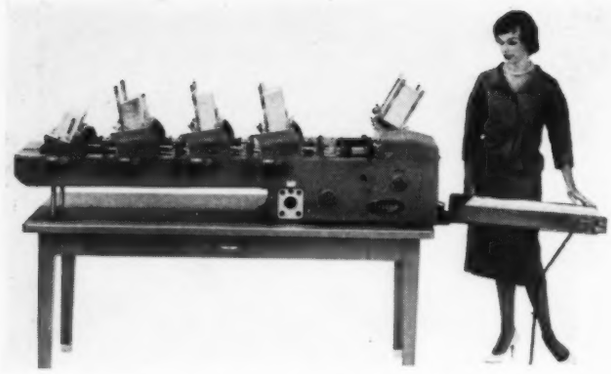
American Publishers Supply, Inc., has announced production of the Form-O-Vac, a semi-cylindrical stereotype mat scorcher. Reportedly, the scorcher pretreats newspaper manually packed and packless stereotype mats to obtain full shrinkage in one operation. It is also claimed by the sponsor that mats can be treated in rapid succession without interruption. Circle No. 282 on Reader Service Card.

PRODUCES NEGATIVE OR TRANSPARENCY FROM IBM, VARITYPE, HAND-SET COPY

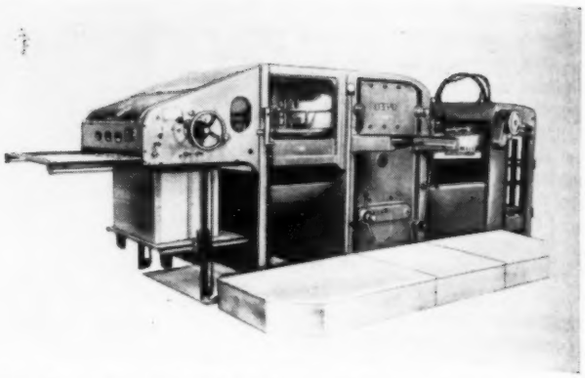
An automatic line composition machine which styles, justifies and photographs original copy prepared on IBM, Varitype and other electric typewriters, or by hand set methods is offered by Specialties, Incorporated. Optype, as the unit is known, produces a transparency or film negative for processing for offset reproduction from the original copy. The time required for



The Klip-All board helps to organize and hold papers eliminating searches for lost orders, etc.



The Friden-Ertma mail inserter with four stations plus punched card station is shown. Up to eight stations are available for the model.



Bobst die cutting and embossing press features a heater built into the upper platen which can maintain a 320 deg. F. temperature.

a line of copy to be styled, justified and photographed is reportedly 5 sec.

It is also said the Optype unit will produce as many as 80 variations from one type style, incorporate headlines and captions within a page, and enables the operator to make line or paragraph corrections without delay. The unit reduces copy in 1 deg. increments and reproduces trademarks and line drawings in proportionate sizes. Also, it is claimed that Optype may be used to condense or italicize copy without distortion. Circle No. 285 on Reader Service Card.

CLAIMS INK COMPOUND REDUCES OFFSET

An ink compound manufactured to reduce offset, soften ink, increase distribution and covering capacity, eliminate static and correct excessive tack has been made available by Indiana Chemical & Mfg. Co. Called Safeset, the compound is said to prevent crystallization and rub off without affecting colors. Circle No. 252 on Reader Service Card.

MAIL INSERTER GATHERS AND INSERTS UP TO EIGHT ENVELOPES

A mail inserter which gathers and inserts up to eight enclosures into envelopes has been announced by Friden, Incorporated. The Friden-Ertma mail inserter, as it is called, then seals, counts, and stacks the envelopes ready for mailing.

Maximum size envelope which the machine will handle is 9⅝ in. by 6⅜ in.; minimum size is 3 3/16 in. square. One to eight inserting stations are available including stations for punched cards and open feeding. Circle No. 281 on Reader Service Card.

DIE CUTTER AND EMBOSSER REPORTED TO OPERATE AT 4500 SHEETS PER HR.

The availability of a Bobst die cutting and embossing press which is said to have a maximum die cutting speed of 4500 sheets per hr. has been announced by Thomson-National Press Co., Inc. Sheet sizes up to 36¼ in. by 49½ in. can be handled.

The press was designed for hot embossing on folding box work. Among its features is a heater built into the upper platen which does not have to be removed when die cutting. A pressure of 550 T. is attained on impression.

A maximum heat of 320 deg. F. can be held and provision has been made to allow for heat expansion to protect vital parts of the press.

The machine is equipped with a clutch mechanism which can be activated by turning an electric switch. When the clutch is engaged, the platen slows down on impression and creates a dwell. According to the company, the combination of heat and dwell results in a high speed embossing operation. Circle No. 280 on Reader Service Card.

THREE PLY VARNISH BLANKET

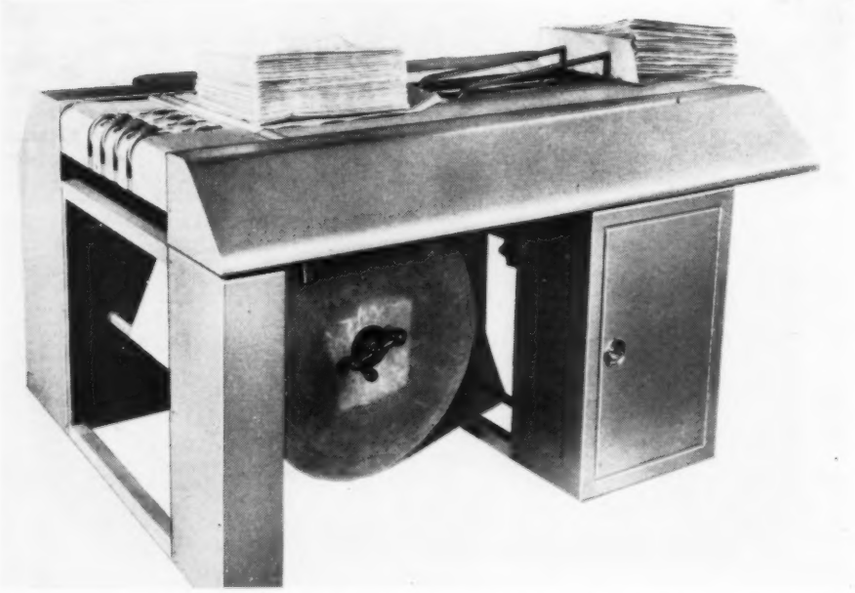
A three ply varnish blanket, designed to lay a uniform coating of varnish on printed stock, has been developed by Goodyear Tire & Rubber Co. The blanket is said to have a nonporous finish which is easy to clean; is constructed of a low tensile fabric, stretch resistant carcass and synthetic rubber facing. The blanket is available in standard .065 ga. and widths up to 77½ in. Circle No. 268 on Reader Service Card.

NEW ADHESIVE PROTECTS LABELS UNDER ADVERSE WEATHER CONDITIONS

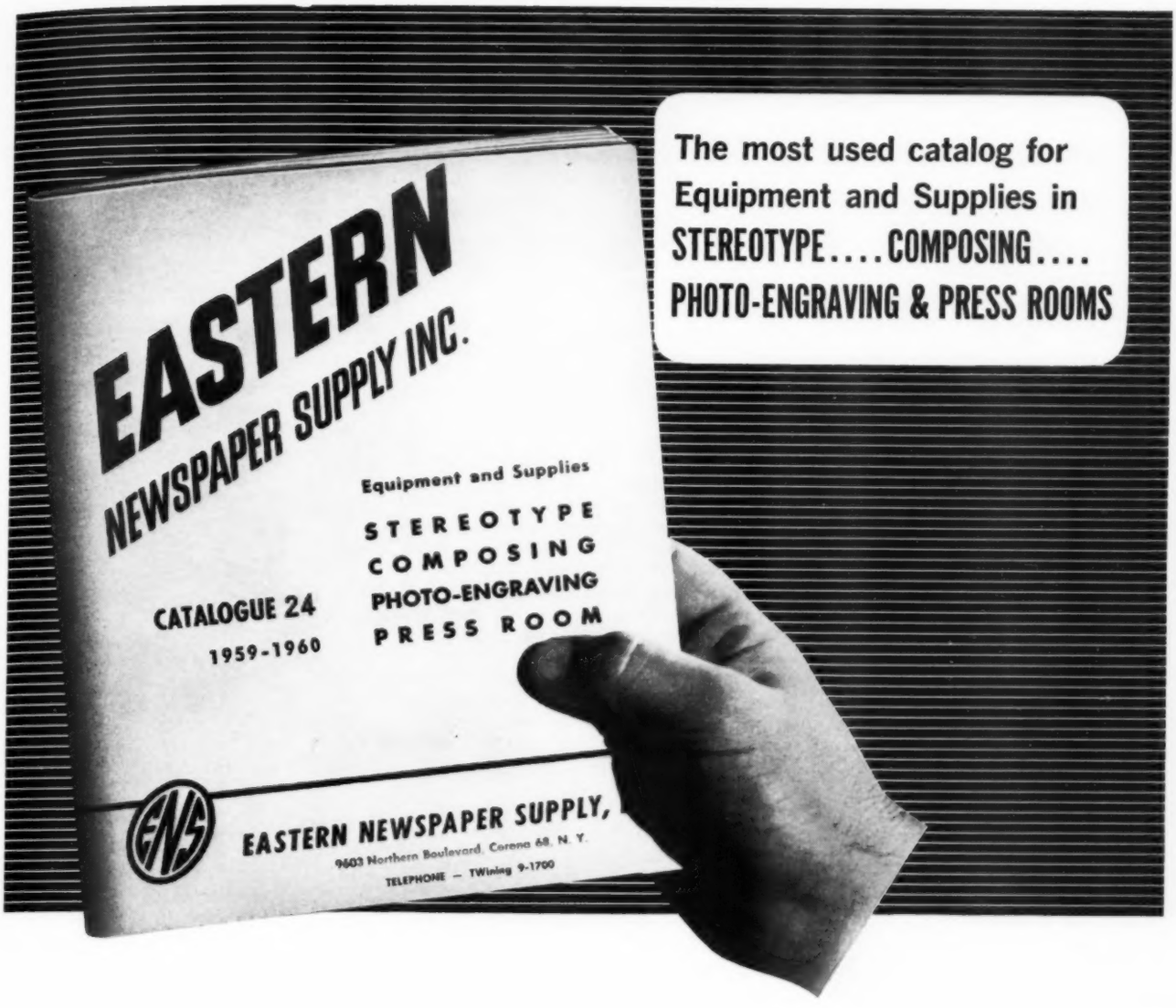
A new adhesive and clear coating which protects labels and adheres them to various surfaces under adverse outdoor exposure has been developed by the Adhesive Div., American Latex Products Corp. Designated Stabond T-325, the adhesive is said to be waterproof and chemical and fire retardant. It is also stated by the manufacturer that the coating will maintain its clarity despite extensive weathering and will assure their adherence to materials such as iron, steel, glass, etc. Circle No. 253 on Reader Service Card.

NEGATIVE COLOR PROVING PROCESS

A wipe-on type of negative color proving process, called Kolor-Kote, has been developed by N. Teitelbaum Sons, Inc. The inks used in the process are applied on a white opaque plastic sheet and exposed to the separation negative. Each sheet is developed with ammonia water for each color. Circle No. 265 on Reader Service Card.



Newspaper Bundle Underwrapper-Feeder Unit—Capacity of Wiretyer Corporation's Combination Model AWF Underwrapper-Feeder which wraps and feeds newspaper bundles to semiautomatic tying machines is said to be 26 to 30 bundles per min. Among the features of the machine are a pneumatic squeezer-timer which straightens bundle sides, aligns the bundle on the underwrap and paces the operation. Pusher arms are provided which push the bundle into place in the tying machine and activate the switch to start the tying operation. Circle No. 259 on Reader Service Card.



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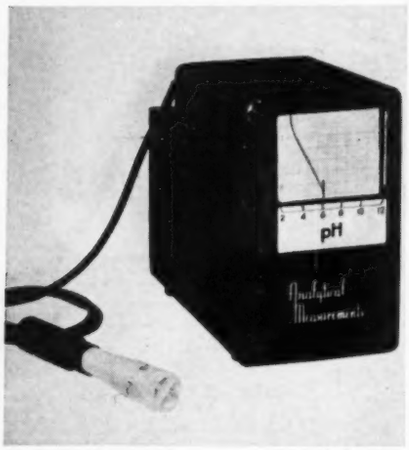
For More Information Circle 71 on Reader Service Card

RECORDING METER PROVIDES CONTINUOUS PERMANENT RECORD OF pH CHANGES

A pH meter which incorporates a strip chart recorder for noting pH changes has been announced by Analytical Measure-



ments, Inc. The strip chart recorder forms the front panel of the instrument and contains a 63 ft. roll of chart paper which will last for 31 days at 1 in. per hr. Speeds to 16 in. per hr. may be obtained by a gear change. A switch on the front panel permits disconnection of the chart drive, converting the instrument to an indicating pH meter.

The meter utilizes an electronically modulated amplifier that compensates for line voltage fluctuations. The amplifier uses standard radio tubes. Connections for insertion of a platinum resistance thermometer provide automatic temperature compensation. Another feature of the meter is the probe unit which provides a unitary glass electrode system protected by polyethylene. Circle No. 286 on Reader Service Card.

BURNING-IN STOVE, GUILLOTINE AND BEVELLER ANNOUNCED BY KORN

Newly developed photoengraving equipment, manufactured by Sidney R. Littlejohn & Co., Ltd., has been announced by Henry P. Korn Associated Inc., distributors. The machinery includes a plate burning-in stove, guillotine and beveller.

The Ejecta-Plate burning-in stove is said to eliminate overburn on all types of resists. It is operated and controlled electrically, and will accept plates up to 20 in. by 24 in. The plate is automatically ejected when a preset temperature is reached. A temperature range is provided from 100 deg. C. to 400 deg. C. The machine was designed primarily for burning in P.V.A. resists on all metals including fish glue enamel on copper. The machine, however, is not recommended for fish glue on zinc.

Infrared heaters controlled by thermostats supply all heat requirements. Plate temperatures are recorded by a built in pyrometer thermo-couple control, the tolerance being ±10 deg. C.

Average burning-in time for P.V.A. resists ranges from 1¾ min. to 2¼ min.

Also available is a power guillotine which, according to the Littlejohn company, will cut standard engraving metals without burrs. The unit is foot switch operated with a maximum cut of 30 in.

The 24 in. power operated beveller is equipped with a rise and fall table and allows interior bevelling up to 20 in. by 20 in.

The equipment will be shown at the forthcoming American Photoengravers Assn. convention to be held in Buffalo, Oct. 9-12. Circle No. 278 on Reader Service Card.

APPLIES METAL TEARING EDGE TO DISPENSING PACKAGES

A machine which applies a metal tearing edge or strip to cartons which dispense foil, waxed paper, etc., has been developed by Faustel, Incorporated. The machine is available in two sizes: Series C which handles carton blanks from 7 to 24 in. and series D which accommodates blanks from 8 to 30 in.

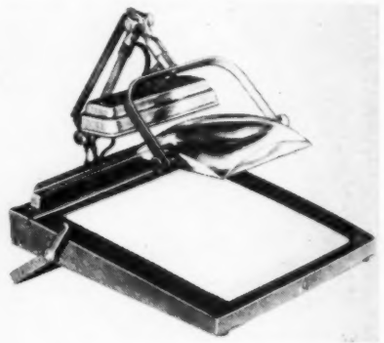
The tear strip may be applied to either the edge of or one panel back of a carton blank. The unit—a control console and power motor—is incorporated within a single frame. Circle No. 287 on Reader Service Card.

UNIT CLEANS GRAVURE BRUSH ROLLS

A machine for cleaning gravure press brush rolls has been introduced by Bar-Plate Mfg. Co. The unit consists of a stainless steel tank in which are attached two brush rolls and two solid aluminum rolls for washing three gravure rolls at one time. The cleaning rolls are located within ½ in. of the bottom of the tank to minimize the amount of cleansing solvent required. Circle No. 288 on Reader Service Card.

ILLUMINATED MAGNIFYING VIEWER FOR OPAQUING, STRIPPING, MASKING

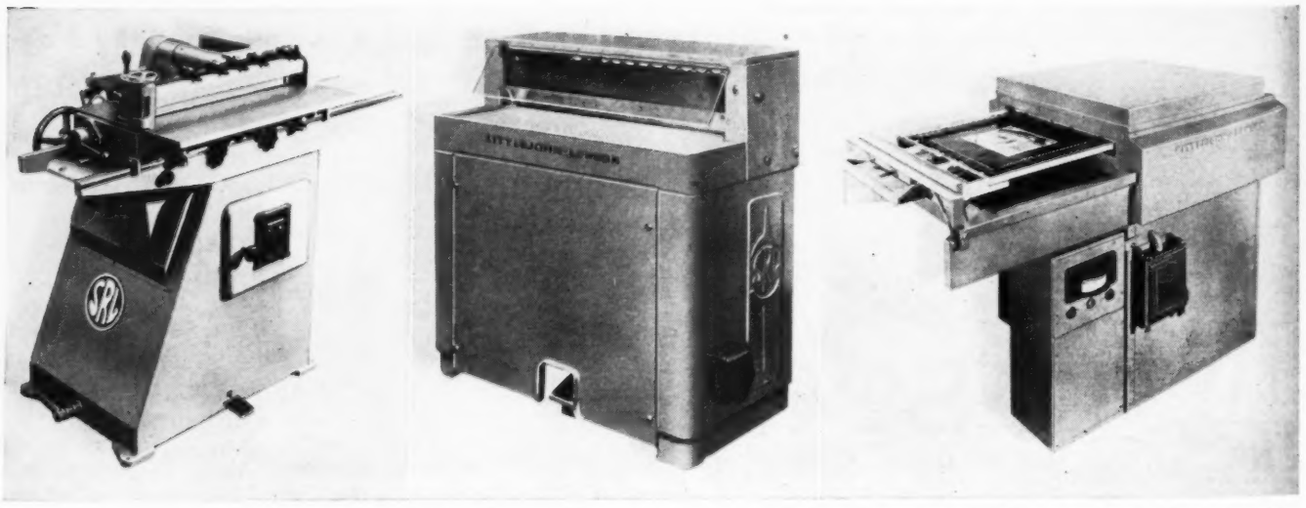
An illuminated magnifying viewer for many Graphic Arts applications which require bright lighting and full view mag-



nification has been developed by Fostoria Corporation.

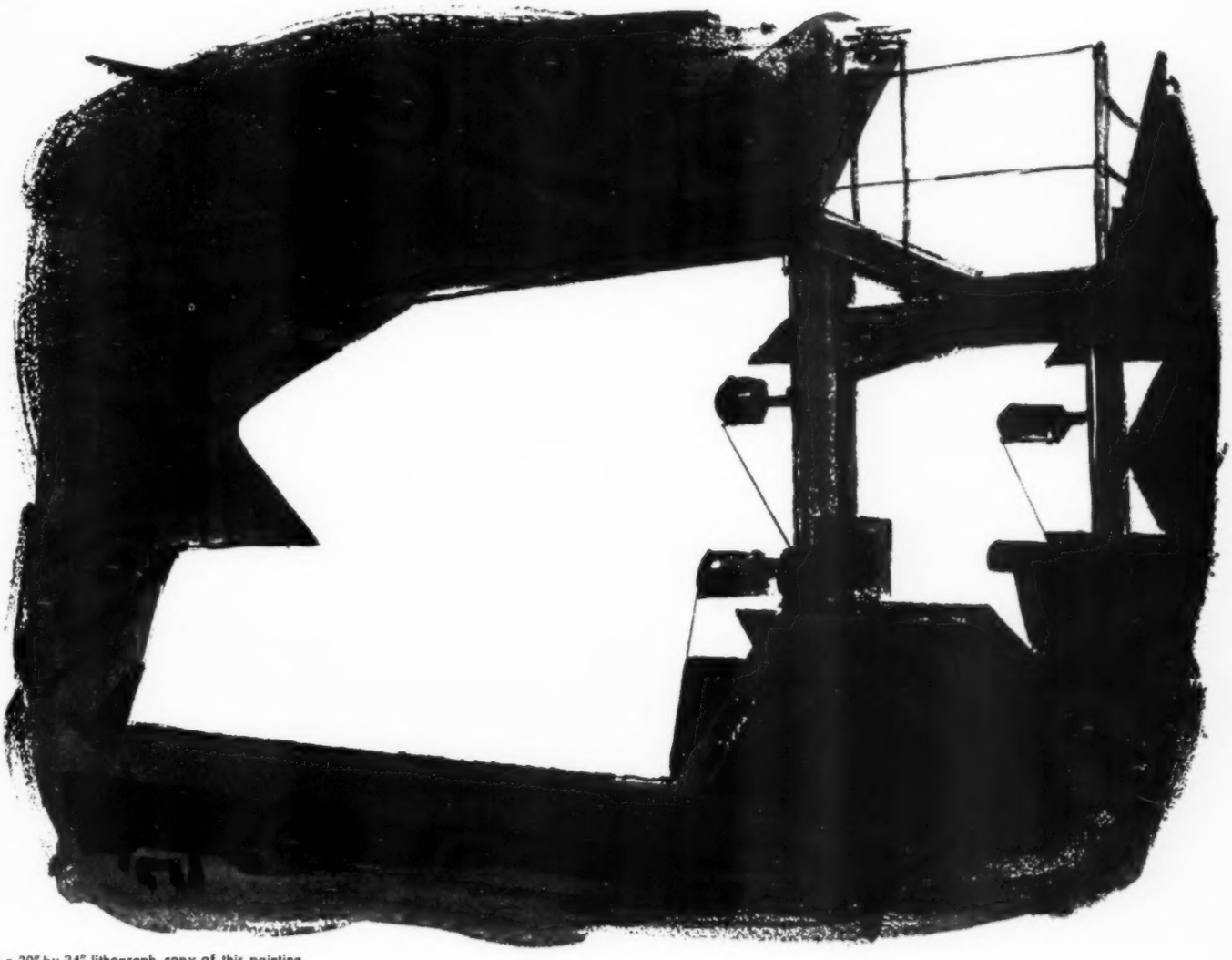
The viewer, Model DSV, features a 6 in. by 6 in. optically ground acrylic lens that provides three dimensional depth perception. Two 4 W. fluorescent tubes light the working area, and a soft diffused underlighting is provided by two recessed 8 W. fluorescent lights beneath the viewing table base. Underlighting and overhead lighting are controlled independently. In addition, the lens and overhead light may be positioned separately by means of friction collar disc joints.

The table may be adjusted to lie flat or slant. Recommended uses include film viewing, stripping, masking and opaquing. Circle No. 289 on Reader Service Card.



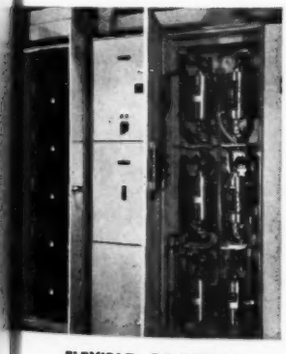
Left, the power operated 24 in. beveller allows interior bevelling up to 20 in. by 20 in. The power guillotine, center, is said to be vibrationless and noiseless in operation. Its cutting maximum is 30 in. The Ejecta-Plate burning-in stove is designed to eject plates when heated to a preset temperature. The British-made equipment is handled by Henry P. Korn Associated Inc.

Before you buy a drive system . . .



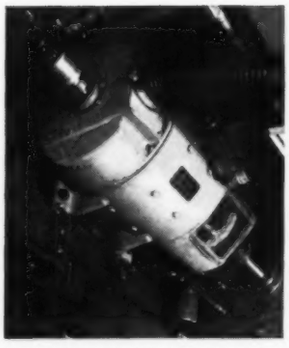
For a 20" by 24" lithograph copy of this painting suitable for framing, write to the address below.

Let's Talk Press Drive RELIABILITY



FLEXIBLE CONTROL includes convenient selector cubicle (left) and industry-proven ignitron rectifier equipment (right).

COMPACT G-E low-voltage draw-out switchgear provides highest degree of continuous power, needs little maintenance or attention.



G-E KINAMATIC® d-c unit-drive motors provide smooth, stepless acceleration from threading or inching to full operating speed.

Reliability of the General Electric d-c press drive is one of your first questions—and one of our favorite subjects. Here are some reliability facts:

MORE THAN 200 HIGH-SPEED PRESSES are powered by G-E engineered d-c drives—a years-ahead record of experience and customer satisfaction. What could be more convincing evidence of General Electric reliability than widespread acceptance?

During more than 14 years of experience with d-c press drives, General Electric has been continuously refining the drive system—incorporating new technology and eliminating components whenever possible. As a result, these drives are expertly engineered blends of the sturdiest heavy-duty components. And each refinement has been field-proven, dependably powering high-speed presses day after day.

WANT TO HEAR MORE about reliability? Your local General Electric Apparatus Sales Engineer will be glad to tell you in detail about the G-E press drive—its reliability, its performance, its flexibility. Call him today. And write for Bulletin GET-2504, Section 653-53, General Electric Company, Schenectady 5, New York.

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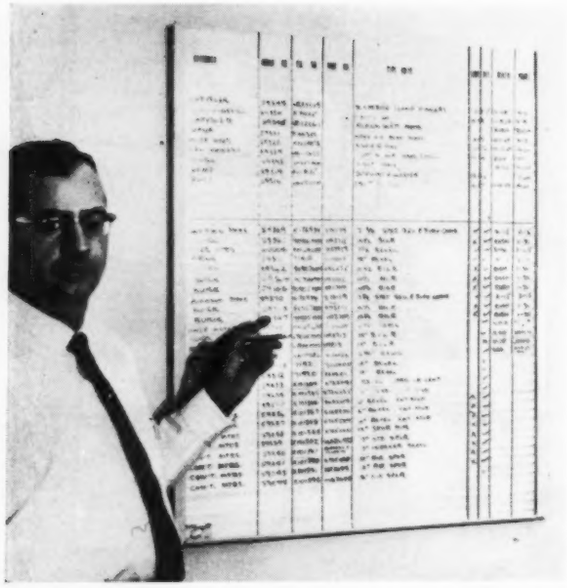


Memo Flex control board carries information on clear plastic strips which snap in and out and can be arranged at will. Column lines are made of pressure sensitive tape and headings are made up from letters on a pressure sensitive backed alphabet sheet.

CONTROL AND SCHEDULING BOARD PACKAGED IN DO-IT-YOURSELF KIT

Memo Flex Div. has introduced a visual control board which can be used for scheduling operations. The board is delivered in kit form which allows flexibility in adapting it to individual plants and operations.

The board itself is made of vinyl laminated steel and is 31½ in. wide by 38½ in. high. Columns are made by applying pressure sensitive tape. Headings are supplied on an alphabet sheet which has a pressure sensitive backing. Clear plastic memo strips, ¾ in. wide and 31 in. long, are provided on which control or scheduling information is written in grease pencil. Circle No. 275 on Reader Service Card.

DOCTOR MACHINES FOR SALVAGING STOCK USED FOR PAPER, FILM, PLASTIC, ETC.

A line of doctor machines for salvaging paper stock and other materials has been announced by Stanford Engineering Co. The machines are recommended for salvaging telescoped, unevenly wound rolls and converting them into saleable stock without requiring the use of slitters. It is reported that the units may be used with paper, film, plastic and most other web materials.

Control features include an automatic web guide that is said to hold side register within 0.010 in., a vacuum controlled brake that keeps the web at correct and constant tension, and an Adjusto-Speed drive tachometer controlled drive that maintains an even web speed.

Three models of the doctor machine are available. Model 182 operates at speeds to 1000 f.p.m. and handles rolls with diameters to 20 in. Model 140 handles rolls to 30 in. wide with 24 in. diam. Maximum weight handled by this model is 250 lbs. The third doctor machine is a bench type portable unit. This lightweight machine is designed especially for tape or other narrow web rewinding where guiding and tensioning are important. Circle No. 290 on Reader Service Card.

KIDDER INTRODUCES CENTRAFLEX PRESS FOR CENTRAL CYLINDER FLEXO PRINTING

The Centraflex central cylinder flexographic printing press has been introduced by Kidder Press Co. The press is designed around a central drum which has a diameter of 86½ in.

Among the features of the unit are Kidder splicers which have been enlarged to handle rolls with diameters of 20 in. and a dual heat drier. The drier has a separate heat source for between-color driers and permits the use of a hot blast against the web after each color station. It is claimed that the temperature and pressure of the air going to the web as it passes from printing station to rewinder may be controlled through the main drying system. Circle No. 291 on Reader Service Card.

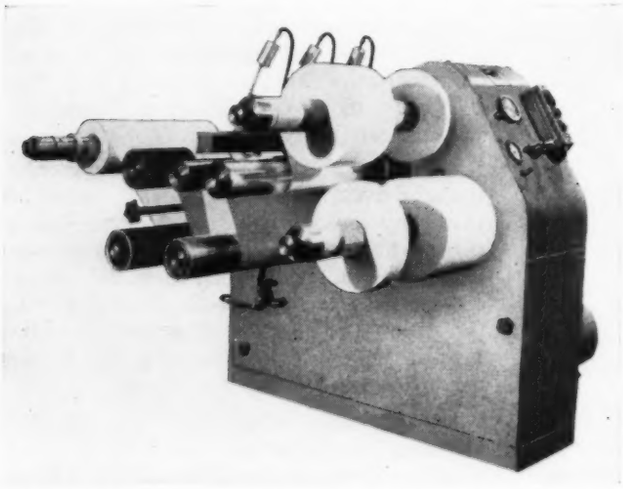
8X MAGNIFIER HAS GRAPHIC ARTS USES

An 8X magnifier called Agfa Lupe has been introduced by Agfa Incorporated. It may be used for examining printing plates, negatives, printed sheets, etc.

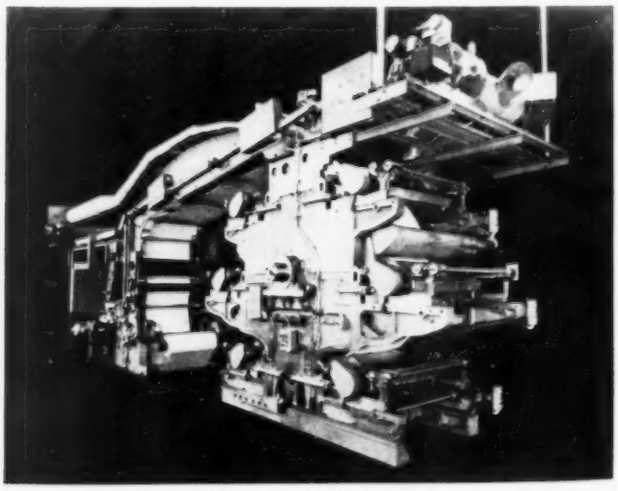
The magnifier has a clear plastic base which admits light to illuminate the area being examined. Glare to the eye is reduced by a black plastic eye ring. Circle No. 271 on Reader Service Card.

ALUMINUM FOIL IN LARGER COILS

The Aluminum Company of America has announced the production of 72 in. diam. coils of aluminum foil laminated printing stock. An advantage of these large coils, says ALCOA, is the longer runs and subsequent elimination of frequent rethreading of web presses in the packaging and labeling field. Laminations available in this size include foil bonded to various types of paper and board. Circle No. 263 on Reader Service Card.



A line of doctor machines designed to salvage telescoped rolls of stock has been introduced by Stanford Engineering Co.



Kidder Press has entered the field of central cylinder flexographic printing with the manufacture of the Centraflex press.

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PRINTING INDUSTRY PATENTS

Covering patents issued April 5, 12, 19 and 26.

All new patents for the printing industry are reported exclusively for PRINTING PRODUCTION by Invention, Inc., an industrial patent research organization in Washington, D. C. Invention, Inc., presently has the only staff in the country that examines, in the U. S. Patent Office, the complete printed copy, drawing by drawing and page by page, every one of the several hundred new patents issued each week. PRINTING PRODUCTION is the only trade publication in its field offering a report based on this complete coverage. For copies of the patents listed here specify the patent numbers and send 25c for each separate patent, or 10c for each trade mark or design patent (stamps not accepted) to the Commissioner of Patents, Washington, D. C.

Composing Room:

PHOTO SPACING DEVICE

For feeding sensitized film in photographic type composing machines, this device uses a single variable escapement to accomplish both character spacing and line spacing. The film is housed in a demountable light-tight magazine, which may be accurately registered with the composing machine. No. 2,933,990 by Rene A. Higonnet and Louis M. Moyroud, assignors to Graphic Arts Research Foundation, Inc.

TYPESETTING MACHINE CONTROL

A perforated tape operated typesetting machine of the type used in small print shops, where there is a limited number of type sizes, includes an assembler slide connected to an electrical control and having spaced contacts oriented in relation to the beginning and end of a line being composed. Thus the device affords the expedient of using previously punched tapes for use with various line widths and letter sizes. No. 2,934,203 by Earl Nause.

CONTROL FOR PROOF PRESS

The adjustment and accuracy of proofing has been improved by providing a three-stage control for a proof press. The three stages are electrically controlled and include a preparatory stage in which the electrical circuit is opened and a proof cylinder is rotated to print position carrying a thick layer of ink. The proofing is completed in second and third control stages. No. 2,932,250 by Georges Kanitz.

SCANNER FOR TYPESETTING

For use in typesetting or casting machines, this scanner will scan each data character in two non-parallel directions, which is called scanning in two degrees. This maintains a smooth movement of the scanning member. No. 2,930,899 by James L. Lyon and Frederick S. Stauffer, assignors to International Business Machines Corp.

Platemaking:

ELECTRO PLATEMAKING METHOD

The apparatus is designed for conveying a plurality of trays through a molten lead bath to cast a lead backing upon an embossed copper printing shell. Weights press the copper shell in each tray to the bottom of the tray and carry core elements for forming slots on the back surfaces of the plate backing layer, which slots aid in mounting the plates on a printing cylinder. No. 2,931,298 by Homer L. Bishop.

DRYING OVEN APPARATUS

For drying or burning-in operations in connection with printing plates formed of magnesium where distortion is a problem, this oven provides a mesh like support for the plates and a uniform flow of heat. No. 2,931,882 by Joseph Strauss, assignor to Trenton Times Corp.

MAKING UNDERBEVELED PLATES

Plates for cylinder presses are efficiently formed by a two-part process comprising

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the forming of and laminating together of a backing plate and an electrotype plate and the bevel is formed in the upper margins of the backing plate before it is joined to the electrotype plate. Thus, the two parts of the laminated plate cooperate to form the undercut grooves, or clip seats. No. 2,934,010 by Thaddeus J. Malicki, assignor to R. R. Donnelley & Sons.

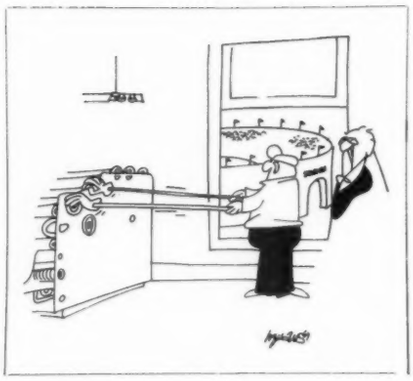
Printing Presses:

PRESS SAFETY DRIP PAN

An oil drip pan for printing presses which are mounted on legs is made up of several sections so that the pan may be placed and removed by tilting only one part of the press during the installing of that part of the drip pan. The pan is also conformed to the general outline of the press so that a pressman does not have to stand within the pan and in the oil while performing press operations. No. 2,934,003 by Frances L. Ladymon.

LOW TEMPERATURE WEB DRIER

For rapidly drying webs such as a printed wax laminated foil or polyethylene, this drier provides for adding a predetermined amount of fresh air periodically to heated circulating air so that the temperature of the drying air may be kept low enough to avoid melting the wax or stretching the polyethylene. This fresh air also dilutes the solvent in the heated used air. No.



2,932,092 by Werner Rosenbaum, assignor to Champlain Co., Inc.

IMPRINTING ON CALENDARS

The arrangement makes it possible for a pressman to set a selector switch to cause the press to print an individual line or name on a predetermined number of calendar pads or sheets before the slug line is discarded. A timer, a selector for each slug line and cam mechanism for ejection of the slug lines cooperate to operate the press. No. 2,931,293 by Edward W. Peterson, assignor to Brown & Bigelow.

GRAVURE INK SEAL MEANS

To prevent slinging the ink from a printing cylinder and to aid drying, this apparatus uses a trough-like ink reservoir at one side of the cylinder and a non-scratching flexible ink impervious sheet extends from the trough to the printing cylinder and terminates at the doctor blade, enclosing the section where ink is carried to the cylinder. No. 2,931,297 by Edward A. Coudriet, assignor to Inta-Roto Machine Co., Inc.

SHEET REVERSING CYLINDER

To avoid prior difficulties with sheet reversing cylinders using fixed blowing tubes, this arrangement incorporates the blowing tubes inside the cylinder so that the tubes rotate with the cylinder. No. 2,931,647 by Paolo Papa and Federico Capetti.

INTERMITTENT FEED OF WEB

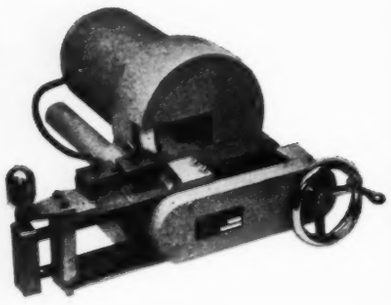
An intermittent motion is imparted to a web as it leaves a printing press to be fed to a punch press so as to assure that the web has zero velocity at the moment of treatment by the punch press. No. 2,932,508 by Rolf Tennler, assignor to Firma Fr. Hesser Maschinenfabrik-Aktiengesellschaft.

SHEET TRANSFER MECHANISM

To prevent smudging of sheets on multicolor rotary printing presses, this mechanism uses aerodynamic means for controlling and maintaining the body of the

TRI-Q

ROUTER BIT SHARPENER



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TOASTER
AUTOMATIC PRE-DRYING AND DEPTH-SETTING MACHINE

The TRI-Q TOASTER will—

- Retain Maximum Molded Depth
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- Eliminate Buckling
- Eliminate Case Hardening
- Make Packing Faster and Easier — Because Mats Are Flat
- Tell When a Mat will Be Finished By a Glance At The Timer
- Provide Faster Mat Packing Because Packing Sticks Better

So simple to use! The operator just slips the wet mat into the machine, which automatically starts. At the end of a pre-set cycle the finished mat is returned . . . ready for trimming!

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sheet in its normal path of travel and avoids contact with its printed face. No. 2,933,039 by Carlton C. Claybourn and Roman L. Kobos, assignors to Miehle-Goss-Dexter, Inc.

DRY DUPLICATING MACHINES

A dry duplicating method is carried out on this machine by providing a master sheet having a colorless reversed positive written text of acid-sensitive dyestuff. This is mounted on a rotary drum, subjecting the master to pressure contact with a copy sheet carrying an acid fix, and then exposing the copy sheet to heat. No. 2,934,007 by Frederick George Francis, and Robert James Moulton, assignors to Caribonum, Ltd.

Feeding, Folding, Delivery:

SEPARATING PAPER FOLDED LAYERS WITH PROTRUDING EDGE

In processes for interleaving and stapling sheets together, this apparatus keeps the projecting margins of folded signatures to a desired dimension, which is 1 to 2 mm., by feeding the paper against aligning pockets or gripper jaws in such manner that the separation of the paper commences to act every time at the same distance from projecting margins. No. 2,933,312 by Rudolf Hepp.

WEB TENSION MEASUREMENT

This web tension measuring and indicating device will operate accurately regardless of the width of the web. The device is electrically operated and is capable of being calibrated easily to maintain the indications within a predetermined nominal or desired range. No. 2,931,962 by William F. Huck, assignor to Huck Co.

SHEET GRIPPER ELEMENT

The gripper posts are designed to more positively grasp and hold a sheet during its passage through a press. This is accomplished by etching the gripper posts with a multiplicity of minute peaks having relatively coplanar tops. No. 2,933,040 by Richard W. Helmig, assignor to Harris-Intertype Corp.

COLLECTING FLEXIBLE SHEETS

The feature of Patent No. 2,933,313 is the regulation of the speed of collecting flexible sheets at different phases of their travel so that signatures of varying thicknesses can be accommodated. In Patent No. 2,933,314, the sheets are delivered to a packer box which is disposed at a downward angle so that the sheets themselves will pack under their own weight in the desired stack. Both patents use conventional conveyors. No. 2,933,313 and 2,933,314 by Anton R. Stobb.

Miscellaneous:

PLASTIC BOOKBINDING METHOD

The invention provides for forming comb-like plastic blanks into binding elements by curling the binding elements while cold and during the forming thereof effecting a bookbinding operation and setting the binding elements to their curled form by heat. No. 2,930,054 by Peter J. Bardy, assignor to General Binding Corp.

WRITING BLOCK CHAIN

To facilitate writing an inscription on a set of forms, such as manifold copy, this writing block chain has no thickened portions which might interfere with the feed. The arrangement provides for locating the adhesive strip by which the set of forms is mounted under the foot end of the preceding block or set of forms which is thinner than the block and can cause no ledges. No. 2,931,666 by Josef Burgmer.

PRINTING PASTES

These pastes have desired consistency without a cooking operation. This is accomplished by using dextrans which are short, tough gums. One paste claimed contains vat dye, chromium fluoride, ammonium oxalate, dextran, water diethylene glycol and formamide. No. 2,933,403 by Harry A. Toulmin, Jr., assignor to Commonwealth Engineering Co.

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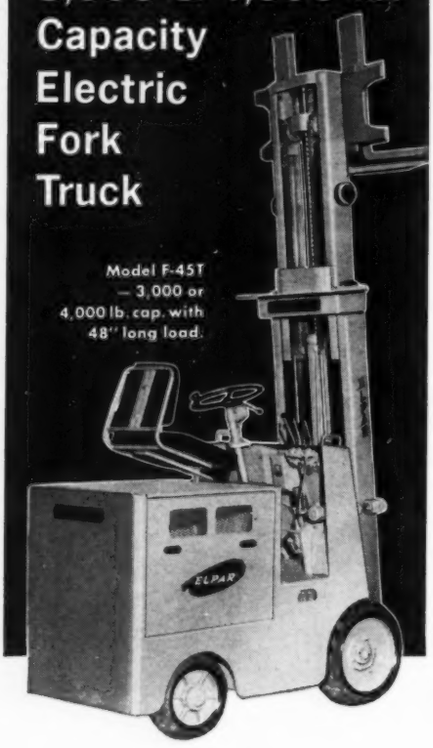

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Composing Rooms Study

(Continued from Page 37)

Wentworth stated that after four weeks of work experienced operators are punching news copy tape at an average of 340 lines per hr. One girl in the group of 12 employed for the project does 550 lines per hr.

High Speed Market Wire

The Associated Press high speed market wire transmission service for afternoon newspapers was inaugurated less than a year ago, stated Blanton Kembell, Associated Press.

Start of transmission is dependent upon close of trading at the New York Stock Exchange. The final Big Board list, usually more than 1200 lines, is completed by 4:18 to 4:19 p.m. on the average. Transmission is at the rate of approximately 2000 agate lines per hr. The Bond list and other miscellaneous markets are transmitted afterwards.

Operators use standard Teletypesetter tape perforators, modified to include an electrical trip mechanism. The tape is fed directly into the wire as perforated. No correcting is done before transmission. Perforating errors, Kembell said, average less than 15 for any single transmission of the complete stock list.

The Miami *News* machines are equipped with mat detectors thereby eliminating proofreading completely. The *News* locks up the final edition market page within 5 min. after completion of transmission and is able to get papers on the street about 20 min. earlier.

Kembell said the Associated Press is working with several manufacturers on an electronic digital computer. The proposed equipment accepts information directly from the stock tickers and automatically sorts, tabulates and rearranges it into the form used by newspapers. He claimed that such a computer will produce the tables in Teletypesetter tape form at more than 200 lines per min.

A complex copy, proof and metal lift conveyor system in the Miami *News* plant was described with the aid of slides by M. R. Millett, composing room superintendent.

To make the need for conveyors more readily understandable, Millett stated the *News* plant contains 176,000 sq. ft. floor space. Forty different conveyors are used within the building. These travel collectively for a total distance in excess of 1000 ft. to and from departments.

To service the composing room, surface belt, drag belt, metal lift and travel conveyors are operated. The conveyors in the system, Millett explained, are essentially copy carrying conveyors to and from editorial and classified advertising departments, TTS tape room plus copy and material carriers used for different services in the composing room. To illustrate, the conveyor from the classified ad department carries copy in unsealed envelopes to the TTS tape punching room. The conveyor extends 168 ft. and travel time is 35 sec.

Speed Service to TTS Machine

One of the interesting applications is the horizontal conveyor system extending between the TTS

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machines on one side and the ring or correction machines on the other side. The top deck in the conveyor framework contains three channels or slots for sending copy from the copycutter's desk to 12 TTS linecasting machines placed in groups of four. The remaining channel is used to send proofs which have been read to the editorial correction machines.

The lower section consists of a 16 in. wide horizontal flat belt. The TTS machine monitors place their slugs with the copy upon a short galley. The galley is deposited upon the moving belt and is conveyed to the dump. A 36 in. wide steel slide plate in fixed position is mounted at the end of the belt. The belt moves the galley with type and copy onto the plate.

If a galley remains on the plate without the dump man removing it, and the conveyor delivers another galley, the oncoming galley gently pushes against the first one on the slide plate without disturbing the slugs on either galley.

Another interesting application is the lift and travel conveyor connecting the dispatch and stereotype departments. When the dispatch department needs casts from stereo mats or cuts to be mounted, mats and/or cuts are sent to stereotype. These are conveyed with instructions to that department 95 ft. away at a speed of 1 ft. per sec. The box-like steel tray in which materials are placed measures 20 in. by 26 in. with 3 in. high sides.

Millett stated, in response to a query from the floor, that carrying capacity of the tray is the weight equivalent of a full page stereotype.

Dispatch Dept. Saves Time

Because printers, costing 5c per min., were spending too much productive time in clerical work, the Phoenix (Ariz.) *Republic* and *Gazette* installed an advertising dispatch and control department. In addition, advertising salesmen were spending too much time doing purely clerical detail work. Also, advertisers were not getting service.

Randall Barton, production manager, described in detail how the department was installed and is now operated. Among details of the system mentioned was the rule in effect that all copy must come into the plant in complete form. The rule is about 95% enforced, he said. Copy marked cuts or mats "to come" is not accepted unless the circumstance is unusual.

Answering a question from the floor, Barton stated ad markup is done in the composing room. The dispatch department itself is non-union operated. The dispatch department keeps a list of proofs in a book so the ad alley skipper will be able to check all proofs out and in.

A brief report concerning field testing performance of the Intertype Monarch TTS tape-operated linecasting machine was given by George Kunz of the South Bend (Ind.) *Tribune*. The first machine was installed in July 1959. He stated that a total of five Monarch machines will be operated after installation has been completed. (For descriptive story see PRINTING PRODUCTION, Oct. 1959, page 64.)

Kunz feels the equipment will operate in actual plant production

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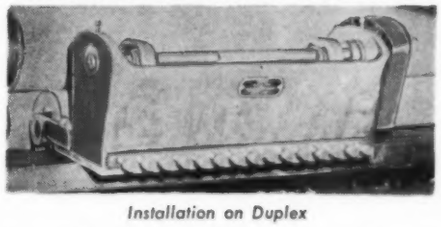

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at designed speeds of eight to 14 lines per min. or a maximum of 840 lines per hr. At the moment, the *Tribune* has attained 85% of the designed output or approximately 714 lines per hr.

In answer to a question from the floor, Kunz stated there were 1% machine errors and 2% operator errors per 100 lines of type.

Production Planning Yardstick

In speaking about work standards and their application in the composing room, Allan M. Woods, production manager of Garden City (N. Y.) *Newsday*, said that they should be well understood before trying to use them. They will help you to define a problem, but won't actually solve it.

The matter was brought to the attention of Woods and his associates when they were considering whether or not to make what he called "a fantastic investment in phototypesetting equipment." Woods wanted to be sure that after the new process had been installed it would pay off and continue to do so, especially photocomposition.

He related that he and his associates had no idea as to how to establish work standards. Consequently, the firm of Collier Elliott & Assoc. was called in to make a study of all composing room operations and establish work standards for each.

Specifically, standards were formulated by the engineering firm as to how long it would take a printer working at a comfortable pace to accomplish a given job in the plant with the equipment provided in that plant.

Woods stressed that establishment of the standards was not intended to be used as a club over the men. The local typographical union cooperated in retraining men to bring their work up to par. In the *Newsday* study, it was shown that some of the men were producing five times as much work as others.

Woods commented that there are many ways in which work standards can be used in the plant. They can help in determining in advance what the composing room work load is so that necessary manpower can be provided.

Color Register Control

(Continued from Page 67)

"There are several advantages in the use of the positive method as far as versatility of control is concerned. In case of a faulty picture, every step in the separation process offers possibilities for correcting the faults. Any editor without technical training can look at the transparency and see the same thing the camera saw when the picture was snapped."

The speaker admitted there are two bad features about positive color: (1) Because of its complexity it is quite time consuming, and (2) Registration problems are most annoying.

Using slides, the speaker showed a typical job in which color separation time had been cut from 2 or 3 hrs. to a total of 35 min. using the positive color method.

Register marks and picture delineation bars for the photoengraver are printed directly on the separa-

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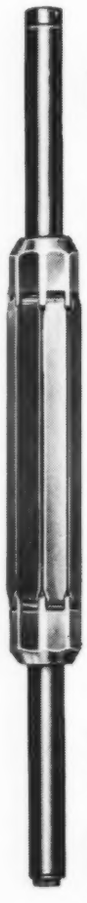

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tion negatives during the minute or so when the masks are drying. He explained another advantage by calling attention to a modified negative carrier for use in an E3 Omega enlarger. Any combination of two or more negatives can be stacked or all three negatives can be stacked together to eliminate making a black printer. Separate highlight, shadow or area masks can be stacked for any part or all of the print exposure.

Benefits of Negative Color

Don Shortell, speaking about the method of producing color separation negatives outlined the reasons for using negative color at the *Times*. These are: (1) Quality equivalent to that obtained by the use of positive color can be achieved; (2) Appreciable savings in time and materials can be effected, and (3) Because of its simplicity it is easy to learn to do quickly and well.

Shortell said *Times* photographers use an 85 or 85C filter in taking negative color shots to warm up cold or blue light sources. This saves time in making the separation prints in the color lab. Overexposed negatives are not usable.

"Our greatest problem in processing negative color," he acknowledged, "is the difficulty experienced in trying to visualize the actual color. After a year's experience none of our fellows can do it as yet.

"The total elapsed time in making a complete set of separated prints at the *Times*, from receipt of the color negative in the color lab to placing them in the Curtis Color Analyzer, ranges from 1½ to 2½ hrs., depending on our luck.

"Our editorial department expects, and we deliver, full color on a spot news basis when a major event warrants. We need all the luck we can get."

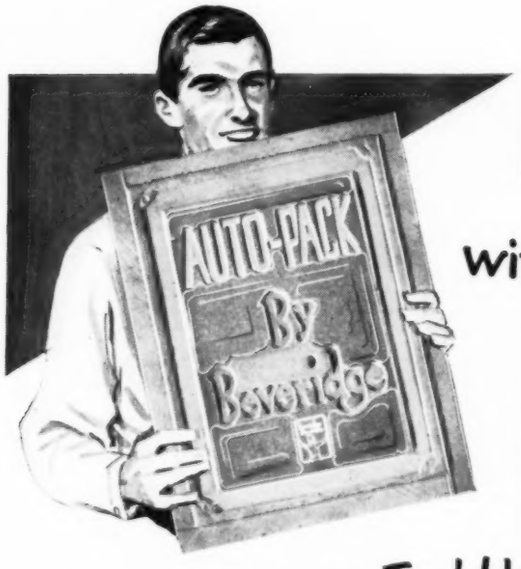
Shortell continued: "We have just begun to make 35 mm. color shots on high speed Ektachrome. We hope to make considerable improvement in our color quality by its use because of the greater freedom from light worries it gives our photographers. We will experience an even greater increase in color photograph quality when it becomes available in the 120 size."

Goes After Quality

(Continued from Page 44)

lb. railroad tank carloads, heated with a steam line in the winter, and pumped into two 100,000 lb. storage tanks. It is pumped from storage into the press unit ink fountains where the level is controlled automatically by float valves. The ink line returns to the storage tanks. There are also by-pass lines in the storage room for recirculation of ink during the time the pump operates. This keeps the ink mixed in the storage tank. There are three 12,000 lb. tanks for storage of process color ink with pumping systems to the proper ink fountains.

Newspapers from the presses, stacks and bundles are handled in the conventional way that most large new plants now employ. Automatic stackers have not yet been adopted. Flow of stacks through the Wiretyers and into the truck is done by conveyors with no manual handling. Stack conveyors are reversible to permit distribution of



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stacks to different tying machines.

QUALITY CONTROL — Quality control at the new plant falls into three categories: That which is built-in and takes place automatically, that which requires special equipment or steps in the operation, and that which is accomplished by skilled supervisors and personnel.

Examples of the built-in variety are: (1) Newsprint is programmed so that individual press units use paper from only one mill, aiding in uniform ink settings and running characteristics; (2) Newsprint having best printability is used on page 1 and the picture page; (3) The brightest and whitest newsprint is used in the color unit; (4) Color is always printed on second impression and on the felt side of the newsprint.

The fifth built-in category is that in printing process color, the four colors are always printed in the same cylinders and in the proper sequence—first, yellow, then red, then blue, and last, black; (6) Leads between color impressions are of minimum length (about 30 in.) which contributes to consistently good register, and (7) Metal used for plate casting is always at the desired temperature (within 3 deg. F.) as the melting is done in a separate master pot.

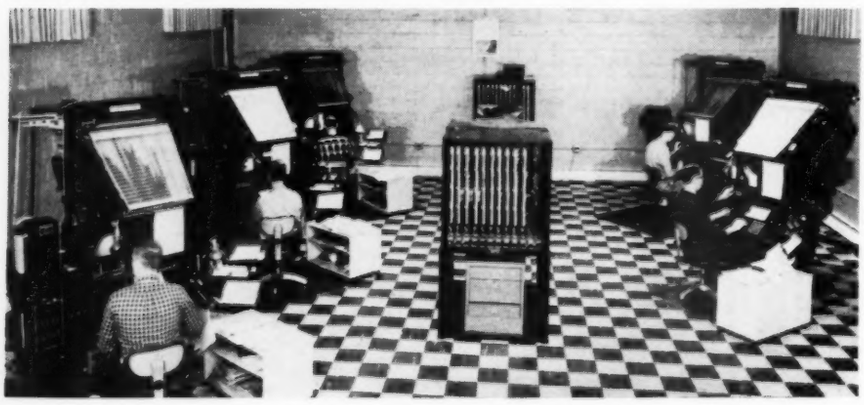
Examples of quality control through special equipment or processes are: (1) Accurate color register is maintained by trimming mats in a registering trimmer, milling plate pockets and side grooves in a registering miller, and with circumferential adjustment devices on the color cylinders; (2) Plates containing halftone color areas are nickel plated to hold dot size; (3) Press color work is done with four color photographic separations as the black offers extra detail and more contrast, while not requiring the accuracy of registry required in three color work, and (4) Color plates are continuously proofed during press makeready, plates accurately registered and ink set before the presses go on edition.

Other makeready details are: The color units are disconnected electrically from the rest of the press by a clutch in the horizontal drive shaft. They are operated at slow speed from separate pushbutton control stations. The web on which the color is printed is wrapped around a core which is driven by a torque motor. Thus an even tension is kept on the color web as it is wound up and when it is stopped for inspection.

After the color plates have been registered and the inking controls adjusted, the web is torn off the core and led into the folder. Only the paper wound around the core is wasted during color makeready, and the black printing units and folder are made ready at the same time as the color.

COLOR PAGE PLACEMENT — Many *News* advertisers have customary positions in the paper and their color pages have to be placed accordingly. Also, some color advertisers request positions on the sport page, facing comic, outside pages, centerfold, etc. The editorial department has specific needs as well.

Most of the requirements for color page positioning have been met by the location of the color units at right angles to the presses. The color web may be slit for separate positioning and may be turned in the turning bar nest to place the color on either side of the page. Webs from the black units are led to the folder either under or over the color webs in the turning bar nest. The system is successful and is used nearly every day.



Graphic Services Employs Five Fotosetters—Five Intertype Fotosetters are now in operation in the composing room of Graphic Services, Inc., York, Pa. The York firm began its photocomposition operation in 1953 with one Fotosetter. Work produced by the firm includes mathematical, chemical and other scientific textbooks.

Look at Electronics

(Continued from Page 41)

starts the motor which removes the film from the developer and inserts it into the stop bath.

Nelson W. Taylor, Duplicating Products Div., Minnesota Mining & Mfg. Co., based his paper upon a study of illumination. He became concerned about the levels of illumination that are recommended by the Illuminating Engineering Society. He attempted to determine whether correct interpretations were being given to the data upon which the recommendations are based.

Taylor indicated that he thought the greatest gain from high levels of luminance of surfaces being viewed was in sharpness of vision. It was his opinion, based upon his interpretation of the data, that visual fatigue or eyestrain would be minimized if the general level of illumination was below the recommendations of the illuminating industry.

In those cases where high sharpness of vision is required, desk lamps and spotlights should be provided. The pupils of the eye contract in an effort to control the brightness, but in many instances it is not enough. It was his conclusion that lighting should be at the level where adequate sharpness is provided for the task at hand.

Electronic Proofreading

Automatic electronic proofreading was described by E. R. Kramer and J. B. O'Maley, both of Airtronics International Corp. Essentially, the process is for comparing punched tape used to operate automatic typesetting equipment with the original typewritten manuscript. The punched tape character is converted into a typewritten character which is compared by electrical impulses with the same character which appears in the draft.

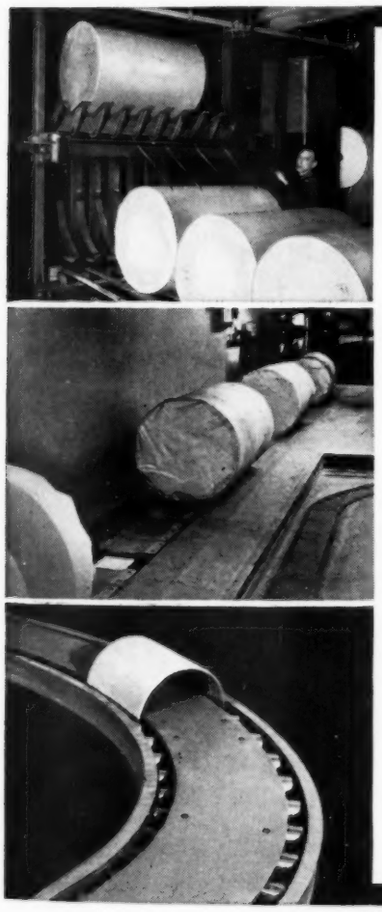
A sample set of characters is prepared from the typewriter on which the original manuscript was written. The sample set is then inserted into the proofreader. Each character of the copy is simultaneously scanned with the sample character selected by the punched tape. The pair of signals produced by the scanning is then compared electronically.

According to the authors, allowance is made in the system for certain imperfections which accompany typewritten copy such as variations in typewriter alignment, ribbon, touch, etc.

If, however, the impulses do not compare, the error indicator marks the tape. This directs the wrong character to be lighted on a character display board and indicates the error location on the tape.

The authors indicated that the proofreader could be adapted to check printed proofs against the tapes for correctness and quality of print. As an example, they said that broken letters could be detected.

In the question period following the presentation interest was shown in the requirements of the original copy. One important aspect was the necessity for clean copy, i.e., there cannot be any author's alterations, corrections or marks upon the



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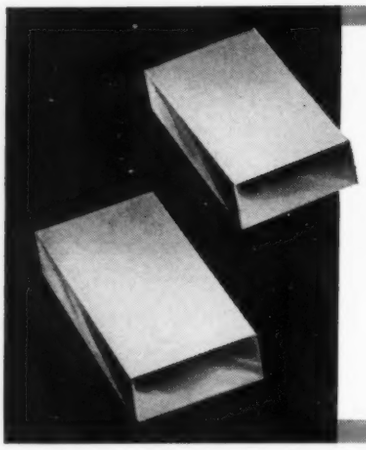

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sheet, or the machine will pick these up and stop. The margins should likewise be kept clean and free of marks.

An automatic ink control system, known as the Inkatron, was described by Herbert L. Weiss, sales manager, Crosfield Electronics, Inc.

The Inkatron is comprised of a densitometer head mounted between the impression cylinder and the blanket cylinder. The light reflected from a scanning mark as the sheet is printed is received by a phototube which produces a voltage proportional to the ink density.

When the press foreman gives his OK for color, the readings of this sheet are used to set the machine to zero. Thus, the Inkatron measures variation of ink density from this standard.

A shutter is operated in the scanning head which allows the phototube to pick up three voltages with each cylinder revolution. One is the impulses created from the darkness while the shutter is closed. The second voltage is produced as the shutter is opened and the white of the paper passing underneath is measured. The third voltage is that produced by the scanning mark.

A computer compares the black to ink density measurements to the white to ink density measurements and derives a steady voltage which is said to be proportional to the ink density.

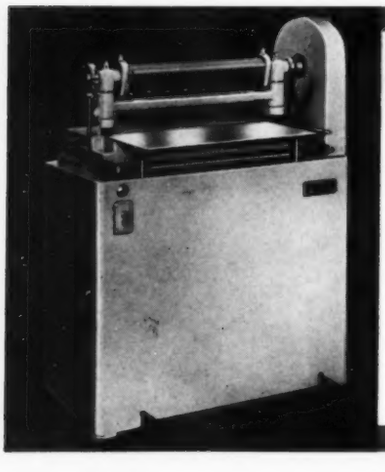
Weiss warned that the Inkatron was not a cure-all. The pressman must still adjust his keys, match his color to the original, prepare makeready, and bring his water and ink into balance. The Inkatron, however, will maintain the approved color throughout the run, Weiss said.

Disputes Density Figures

Controversy centered around the statement Weiss made concerning the amount of control given by the small scanning patch which is $\frac{1}{8}$ in. by $\frac{1}{2}$ in. He said that if the ink density of the patch could be assumed to be zero, the density across the sheet could be held to within 2%. The eye, he said, can see 5% variation, therefore, the Inkatron holds variation within visual limits.

Michael Bruno, research director, Lithographic Technical Foundation, observed that LTF in its studies determined that one of the biggest factors of color density was the water. Water can cause graininess of the print. Other factors he mentioned as contributing to ink variation was loss of pressure and the running of too much water. Increasing the ink does not help the problem. In spite of all their controls, LTF could not hold ink density variation across the sheet within ±5%. Warren Rhodes, head, Graphic Arts Research Dept., Rochester Institute of Technology, confirmed the 5% figure with statistical quality control studies at RIT.

Bruno also spoke on developments and trends in lithography. Limitations in the lithographic process, he said, are the ink-water balance, paper, inks, slur, and overall contact of blanket with paper. He indicated that many developments were made in order to increase quality, but at the same time have helped to keep the process lim-



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itations under necessary check.

In the area of color reproduction and photography, the most important advances have resulted from color surveys conducted by LTF. The survey has resulted in the concept of balanced inks which have helped to eliminate confusion about requirements for color reproduction. It has also simplified and improved color reproduction, he said. Other advances are the new masking techniques and illuminating sources other than arc lamps. New films have also contributed to improvements in these areas.

New methods of dampening and improvements in blankets were other developments mentioned by Bruno. A new blanket which is said to be more compressible than rubber without increasing pressure indicates that a sheet can be better controlled during impression. Bruno said that because of its compressibility the blanket may eliminate slippage and sliding on impression.

Work is being carried on at LTF in studying print quality and the factors which affect it. Attempts are being made to determine how these factors can be measured and controlled.

Instruments are also being designed to control interference patterns such as graininess, moire, mottle, etc.; sharpness and resolution of the print image, and tone and color reproduction. Bruno said that once the instruments have been developed for the measurement and control of such factors, quality and consistent color control by automatic means could be mounted on the press.

Next year's meeting is to take place at the Deshler-Hilton Hotel, Columbus, O., June 12-14.

LPNA Elects Officers and Directors—Officers and directors of the Lithographers & Printers National Assn. are grouped outside the Boca Raton Hotel & Club, Boca Raton, Fla., after their election at the annual convention. Seated are the officers, left to right: Frederick T. Marston, Kaumagraph Co., Wilmington, Del., treasurer; William E. Zabel, Jr., Zabel Brothers Co., Philadelphia, president; L. E. Oswald, E. F. Schmidt Co., Milwaukee, chairman of the board; Ralph J. Wrenn, Stecher-Traung Lithograph Corp., San Francisco, vice president; Oscar Whitehouse, LPNA executive director. The directors in background are unidentified.

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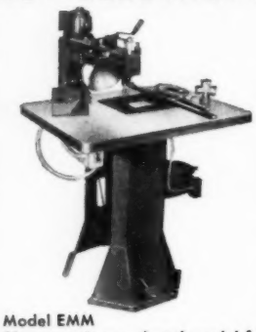

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Helpful Literature

(Continued from Page 26)

control in this printing process. The book is entitled *Modern pH and Chlorine Control*. Circle No. 352 on Reader Card.

DREISSIG BRONZING MACHINE

The Dreissig Kombi 10V bronzing and dusting machine is described in literature made available by Henry P. Korn Associated, Inc. The machine may be used in tandem with either offset or letterpress equipment. Maximum sheet size is 55 in. by 80 in. Circle No. 335 on Reader Service Card.

SCREEN PROCESS PRINTING CATALOG

Advance Process Supply Co., Inc., has compiled a catalog describing its line of equipment for the screen process printing field. Screen printed electronic circuits; high speed screen printers for flat, round and irregular surface imprinting; driers and inks are among the items featured. Circle No. 306 on Reader Service Card.

CATALOG OF CHAMPLAIN EQUIPMENT

A catalog of Champlain film, paper and paperbound roll handling equipment has been compiled by Champlain Co., Inc. The equipment includes the standard types of unwind and rewind units. While the Champlain line was developed primarily for use with multicolor rotogravure press equipment, it is also applicable for use with a wide range of webfed printing and fabricating machinery. Circle No. 321 on Reader Card.

HURLETRON DC PRESS DRIVES

Electric Eye Equipment Co. has published literature on its d.c. press drives. The drives feature modular, static control power conversion units. Circle No. 331 on Reader Service Card.

CONTROL SYSTEM FOR DUPLICATORS

The operating features of the Program-Matic system control attachments for the 1250 Multilith, ATF Chief 15 and Whitin Masterlith are described in a booklet published by American Type Founders Co., Inc. Advantages claimed for the attachment include single lever operating control and automatic feed control. Questions typical of those a person interested in the attachment might ask are answered. Circle No. 314 on Reader Card.

Bindery, Mailroom

SHERIDAN BINDERY EQUIPMENT

T. W. & C. B. Sheridan Co. has prepared informative literature featuring its inserting - stitching - trimming machinery. According to the manufacturer, the unit will insert, stitch and trim books from $3\frac{3}{8}$ in. by 7 in. to 12 in. by 19 in. Circle No. 390 on Reader Service Card.

AUTOQUIP PRODUCTION LIFT

A junior size production lift, the Little Herky, is described in literature prepared by Autoquip Corp. According to reports, the lift weighs 330 lbs. and lifts a maximum of 2000 lbs. Circle No. 338 on Reader Service Card.

MULTIPLE HOLE DRILL

Information on its line of high speed multiple hole drills is available from Lawson Company, Div. of Miehle-Goss-Dexter, Inc. The drills are recommended for use on tablet, business and school supply jobs. Circle No. 333 on Reader Card.

Miscellaneous

QUALITY CONTROL INSTRUMENTS

Quality control instruments and gauges are described in literature prepared by Alico, Incorporated. Among the equipment available are instruments for checking curved plate thickness, depth of halftone dots and the amount of error in the register of colors on printed sheets. Circle No. 308 on Reader Service Card.

SYNTRON CATALOG

A catalog describing vibratory materials handling equipment and paper joggers has been published by Syntron Company.

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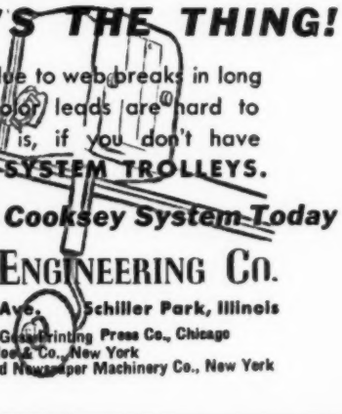

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For More Information Circle 114 on Reader Service Card

The literature contains 68 pages and includes a listing of Syntron representatives. Circle No. 312 on Reader Service Card.

PORTFOLIO OF EAGLE PAPERS

An idea portfolio of printing on Eagle-A Quality text and cover weight has been made available by American Writing Paper Corp. Samples of one and two color printing and unusual die-cuts and folds are included. Circle No. 322 on Reader Service Card.

DIRECT MAILING CAMPAIGNS

Plans for direct mailing campaigns for sales promotions are available from DMCP Assoc., Inc. The program available was created for use by the Cleveland Printing Ink Co., Inc., and reportedly produced favorable results. Circle No. 310 on Reader Service Card.

STRAWBERRY HILL PRESS FACILITIES

A book has been published describing the facilities of Strawberry Hill Press, Long Island City, N. Y. Entitled *Craftsmanship in Gravure and Letterpress*, the book illustrates the performance of letterpress and gravure in the printing of booklets, annual reports and in the packaging field. Circle No. 309 on Reader Service Card.

VACUUM AND AIR PRESSURE PUMPS

Leiman rotary positive air pressure and high vacuum pumps, gas boosters and air motors are described in a catalog issued by Leiman Bros., Inc. Models included feature two and four vanes, single or double cylinders and fan-cooled, water-cooled or air-cooled systems. Circle No. 307 on Reader Service Card.

KIT OF OFFSET SAMPLES

A kit of sample material run on the model 320, Table-Top offset duplicator has been made available by A. B. Dick Co. The samples illustrate the machine's production of office forms, bulletins, letterheads, newsletters, tickets and other material. Circle No. 355 on Reader Service Card.

POWRWORKER STACKERS

A catalog (SS-954) covering Powrworker counterbalanced, high lifting hand truck stackers has been issued by Industrial Truck Div., Clark Equipment Co. Four models of the operator-led stackers are available having capacities of 1500, 2000, 2500 and 3000 lbs. Circle No. 323 on Reader Service Card.

MEAD SAMPLE BOOKS

A new brilliant white stock is included in two sample folders of Mead Papers made available by Mead Papers, Inc. The folders prepared contain Mead bond and Mead Moistrite bond. Circle No. 350 on Reader Service Card.

LETTERHEAD DESIGNS

A portfolio of letterhead designs, created by Pratt Institute School of Advertising Design, has been made available by Parsons Paper Div., National Vulcanized Fibre Co. The letterheads are printed on Parsons stock by both offset and letterpress processes in two and three colors. Circle No. 351 on Reader Card.

VISUAL CONTROL SCHEDULING BOARD

A new visual control scheduling board, the Memo-Flex, is described in a booklet issued by Memo Flex Div., Garrison Machine Works, Inc. The board is manufactured of white vinyl laminated steel board with metalic gold enamel trim. It measures 31½ in. wide by 38½ in. high. Pressure sensitive tape forms the adjustable column lines and pressure sensitive tape letters assemble into the desired word combinations. Circle No. 325 on Reader Service Card.

VARIABLE SPEED DRIVES

A six page folder on model RS P.I.V. variable speed drives has been prepared by Link-Belt Co. The product is a constant horsepower variable speed drive designed to meet capacity demands to 50 h.p. Applications recommended for the drive include speed control for conveying and handling systems. Circle No. 311 on Reader Service Card.

A TRIP THROUGH A PAPER MILL

A booklet which takes its reader on a pictorial trip through a paper mill has been made available by Wausau Paper Mills Co. The booklet illustrates the various steps in the manufacture of paper at the Wausau mill. Circle No. 320 on Reader Service Card.

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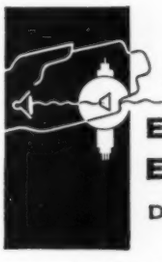

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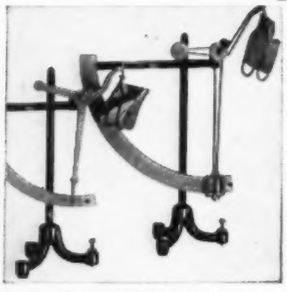

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American Publishers' Supply, Inc. 81
American Steel Chase Co. 90
American Type Founders Co., Inc. 59, 61

Baum, Russell Ernest, Inc. 85
Beveridge Paper Co. 83
Brown, L. L., Paper Co. 6

Cady, E. J., & Co. 90
Capital Tool & Mfg. Co. 81
Carlson, Chesley F., Co. 90
Central Compounding Co. 90
Certified Dry Mat Corp. 20
Chambersburg Lumber Co. 91
Chemco Photoproducts Co., Inc. 57
Cutler-Hammer, Inc. 24, 25

Didde-Glaser, Inc. 27
Doyle, J. E., Co. 91

Eastman Kodak Co. 51
Eastern Newspaper Supply, Inc. 71
Electric Eye Equipment Co. 89
Elwell-Parker Electric Co. 80

Fairchild Graphic Equipment, Div. Fairchild Camera & Instrument Corp. ..21, 84
Force, Wm. A., & Co., Inc. 77

General Electric Co. 73
Gifford-Wood Co. 85
Goss Company, Div. of Miehle-Goss-Dexter, Inc. 48, 49
Great Northern Paper Co. 46

Hammermill Paper Co. 17, 18
Hammond Machinery Builders, Inc. ..... 14, Inside Back Cover
Heidelberg Automatic Presses 13
Hoe, R., & Co., Inc. 23

Imperial Type Metal Co. 10, 55
Interchemical Corporation, Printing Ink Div. 7
Intertype Company ..... Outside Back Cover

Korthe Engineering Co. 88

Ludlow Typograph Co. 8

Main, Chas. T., Inc. 87
Master Sales & Service Corp. 2
Matrix Contrast Corp. 88
Midwest Publishers Supply Co. 80
Miehle Company, Div. of Miehle-Goss-Dexter, Inc. 11, 28
Monomelt Company, The, Inc. 86
Montgomery Company, Inc. 82
Morrison Company 89

Nolan Corporation 12, 91
nuArc Company, Inc. 22

Offen, B., and Co. 91

Paper Converting Machine Co. 82
Paper Manufacturers Co. 19
PRINTING PRODUCTION 4, 89, 91

Richards, J. A., Co. 88
Rouse, H. B., and Co. 91

Scott, Walter, and Co. 15
Shaffstall Equipment, Inc. 84
Sheridan, T. W. and C. B., Co. 53
Sta-Hi Corporation 1
Star Parts, Inc. ..... 16, Inside Front Cover

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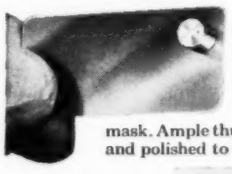

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Circle 33 on Reader Service Card

Tenak Products Co. 3
Transcrit Corp. 91
Tri-Q-Incorporated 78
Type and Press of Illinois 90

Valley Manufacturing Co. 87
Vandercook & Sons, Inc. 91

Wood Flong Corp. 79
Wood Newspaper Machinery Corp. 9

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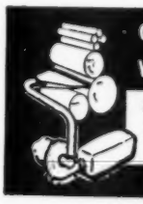

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M-G-D Expands in Europe—P. Bollman (left) and S. Robinson (right) have been appointed Dexter bindery equipment sales managers for Graphicart, Berne, Switzerland, and Miehle, Ltd., London, England, respectively. Both firms are subsidiaries of Miehle-Goss-Dexter, Inc. Also shown is T. Niggli, manager of overseas operations.

Distributes Data on Printing Careers—Arthur Olney (left), Boston manager, Harris-Seybold, presents printing career information to Dr. David R. Cook, Testing and Counselling Center, Northeastern University. Watching (right) is Hamilton Reilly, president, Buck Printing Co., Boston. The literature was prepared by the Education Council of the Graphic Arts Industry and distributed through a grant by Harris-Intertype Corp.

GRAPHIC VIEWS

of the Printing Industry

Comet Shipped Coast-to-Coast by Air—The first Comet 300 Linotype to be flown from the East Coast to West Coast is seen at the Los Angeles International Airport before delivery to the Santa Monica (Calif.) *Evening Outlook*. Left to right are: Chet Plewa, Mergenthaler Linotype Co.; Deane Funk, assistant general manager; Chet Rosene, composing room foreman, and J. D. Funk, general manager—all of the *Evening Outlook*.

Customers Drive in Type Copy—A customer deposits his order for typesetting into the handy drive-in box installed by Western Typesetting Co., Kansas City, Mo. The building sign above is Western's method of winning identification for its typesetting services.

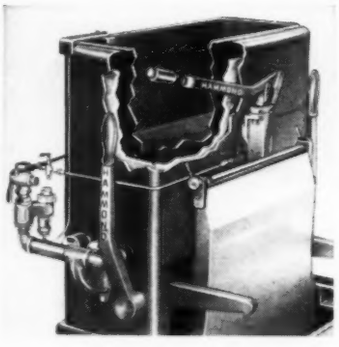
Kenro Opens New Camera Manufacturing Plant—A new plant at Cedar Knolls, N. J., which approximately triples the size of the company's former facilities has been opened by Kenro Graphics, Inc. Shown is the final assembly room where operations are being completed on the, left to right: Vertical 18 in., 24 in. and 14 in. camera models.

Receives Gold Watch—Paul C. Gustafson, right, traffic manager, Miehle Company, Div. of Miehle-Goss-Dexter, Inc., receives an inscribed gold watch upon completion of 40 years service with the firm. Presenting the watch is J. W. Coultrap, president, Miehle.

Hammond "8" EasyKaster

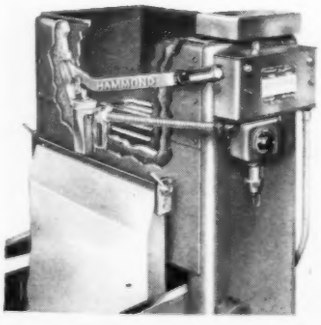
- 20" x 27" capacity . . . more than full-page.
- 800 lb. valve controlled gas or electric attached melting pot.
- Automatic equalized four point bed lock-up.
- Rolling bed balanced and mounted on needle bearings.

MODEL EK-8
without melting pot



GAS MELTING POT

- Doubly welded fire-box steel pot.
- Insulated for minimum heat loss.
- Three gas burners heat pot uniformly.
- Partlow automatic temperature control.



ELECTRIC MELTING POT

- Doubly welded fire-box steel pot.
- Insulated for minimum heat loss.
- Three tubular electric elements directly contact metal.
- Partlow automatic temperature control.

The Hammond EasyKaster "8" is the combination of a valve controlled 800 lb. capacity melting pot, with the finest automatic bed lock-up. This combination provides continuous supply of hot metal to produce faster and more accurate casts. The 800 lb. capacity melting pot has ample supply of metal to cast . . .

7 Full-page type-high casts

or

35 Full-page shell casts

all without adding new metal. However new metal can be added to the pot and brought to pouring temperature as fast as cast solidifies.

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ROYAL

A big league debut is a chilling experience for a wide-awake ball player. Nor is it helpful to the peace of mind to realize that a crafty pitcher is on the opposition team. Yet the rookie of the year faced him with the courage he was to display against every pitcher he met. In his first time at bat he hit a single to right. Then he blasted a triple off the center-field wall. Another single stayed a single only because the ball bounced from the right-field wall with such violence that the fielder was able to hold the hit to

IMPERIAL

A big league debut is a chilling experience for a wide-awake ball player. Nor is it helpful to the peace of mind to realize that a crafty pitcher is on the opposition team. Yet the rookie of the year faced him with the courage he was to display against every pitcher he met. In his first time at bat he hit a single to right. Then he blasted a triple off the center-field wall. Another single stayed a single only because the ball bounced from the right-field wall with such violence that the fielder was able to hold the hit to

REGAL

A big league debut is a chilling experience for a wide-awake ball player. Nor is it helpful to the peace of mind to realize that a crafty pitcher is on the opposition team. Yet the rookie of the year faced him with the courage he was to display against every pitcher he met. In his first time at bat he hit a single to right. Then he blasted a triple off the center-field wall. Another single stayed a single only because the ball bounced from the right-field wall with such violence that the fielder was able to hold the hit to

WINDSOR

A big league debut is a chilling experience for a wide-awake ball player. Nor is it helpful to the peace of mind to realize that a crafty pitcher is on the opposition team. Yet the rookie of the year faced him with the courage he was to display against every pitcher he met. In his first time at bat he hit a single to right. Then he blasted a triple off the center-field wall. Another single stayed a single only because the ball bounced from the right-field wall with such violence that the fielder was able to hold the hit to

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